

10 Years of
HEALTH PROGRESS

1947-1957

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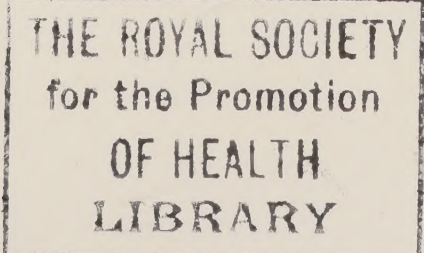
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of the
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Issued in Connection with the
12th Session of the W.H.O. Regional Assembly
to be held at Queen's Hotel, Kandy
from 23rd to 29th September, 1959



TEN
YEARS OF HEALTH
1947-1957
Ceylon

1959

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Department of Health, Colombo,
Ceylon.

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Foreword

I AM indeed very happy to write this FOREWORD for a publication that records the progress of the Health Services of Ceylon during the last ten years of Independence (1947-1957).

This publication which is being issued on the eve of the twelfth Sessions of the Regional Committee for South East Asia of the World Health Organization to be held in Kandy from 23rd to 29th September, 1959, reminds me of a similar publication entitled "THE HEALTH OF THE NATION" that was issued in 1950 to commemorate the first occasion on which this country became the venue of an international conference sponsored by the World Health Organisation. I refer to the third South East Asian Session of W. H. O. held in Kandy in 1950. I am happy to recall that at that time I was not only the Minister of Health and Local Government in the Government of Ceylon but was also the Chairman of the Regional Committee of W. H. O. for South East Asia.

During the last ten years of Independence we have certainly forged ahead in regard to the development of the Health Services of the country. As tangible proof of that progress it may be mentioned that the infant death rate which is considered by all health workers to be the most sensitive index to a nations health, fell from 101 per 1000 live births in 1947 to 68 in 1957. At the same time the expenditure on the Health Services of the country increased from Rs. 3.39 per head in 1947 to Rs. 10.90 in 1956/57, demonstrating most emphatically that the National Government is fully alive to the importance of building up a healthy nation.

I would wish to say that during the last three years, since I became Prime Minister, I have done my best to give every possible assistance for the better development of the Health Services of the country. But it will be realised

that our financial and economic conditions do not permit us to incur all the expenditure that is really needed to bring up our health and living standards to the highest possible level.

It is here that we really need the assistance and guidance of international organisation like W. H. O. We are indeed grateful to W. H. O. for all the assistance we have already received by way of scholarships, fellowships, consultant services, equipment and other facilities. And I hope that W. H. O. will continue to appreciate the central position that Ceylon enjoys in the region of South East Asia and help to develop her Health Services to the fullest possible extent.

S. W. R. D. BANDARANAIKE,
Prime Minister of Ceylon.

Message

THE Preamble to the Constitution of the World Health Organisation states that the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being.

Whatever may be the progress that the Public Health Services had made in the Colonial days, there is no gainsaying the fact that during the last 10 years since the achievement of Independence there has been a remarkable development in these services in this country for the prevention of disease and the promotion of health.

It is but opportune that the Department should have decided to produce this Brochure on “Ten Years Health Progress” when, for the second time within the last ten years, the South East Asia Regional Committee will be holding one of its annual sessions in this country. What we have achieved so far is briefly described here, while what we propose to do in the future will be found in the Five-Year Plan that has been issued by my Ministry.

I am certain that these two records will be a great help in understanding the steps that have been taken to develop a better health service for our people, and at the same time assist our neighbours in the South East Asia region in the tackling of their particular health problems in the light of our experience.

A. P. JAYASURIYA,
Minister of Health.

Introduction

THE national Government of this country is fully conscious of the importance of providing an efficient health service in its programme for economic development. It has, therefore, adopted all possible measures, in keeping with the resources of the country, to raise the general standard of health of the population.

There has been a steady expansion of the health services since the introduction of the Donoughmore Constitution in 1931 and this process was greatly accelerated with the granting of Independence in 1947. In the foregoing pages an attempt is being made to describe briefly the trend of development of the Department of Health during the ten years of Independence (1947–1957) with special reference to some of our notable achievements during this period.

As demonstrating the extent of this expansion of the Health Services, and the determination of the National Government to do all it can for the promotion of health and the prevention of disease, the increase in the expenditure per head on the health services from Rs. 5.39 in 1946–47 to Rs. 10.90 in 1955–56 bears tangible evidence.

The results of this increase in expenditure and the expansion of the services are reflected in the vital statistics for the two periods. Of these, the infant death rate is the most sensitive index to the state of a nation's health. The fall in the infant mortality rate from 101 in 1947 to 68 per 1,000 live births in 1957 is the most significant event in all the vital occurrences during this decade. Although this is the lowest recorded for any country in the whole of S. E. Asia, there cannot be any reason for complacency as the figure is still high, compared with those of more progressive countries.

The maternal death rate of 15.5 per 1,000 live births in 1946 was very appreciably reduced within a period of four years to 5.6 in 1950. No further improvement occurred until 1953, but thereafter the rate has come down gradually to 3.7 in 1957. This was due to the reorganisation of the maternal and child health services in 1953 when the hospital obstetrician and paediatrician too began to participate in this activity. However, the maternal mortality rate

of 3·7 so far reached is still three times as high as the rate obtaining in some of the other countries. The crude death rate has been reduced from 14·3 in 1947 to 10·1 in 1957.

Of special significance is the increase in the life expectancy at birth during this period. From 35 years in 1920 it increased to 44 in 1946 ; while during the last decade it has risen up to 60 for males and 59 for females, a fact which has been commented on by the W. H. O. as “ an unparalleled achievement in modern demography ”.

During the period under review there has been a substantial increase in the staff employed by the Department. There has also been a proportionate increase in the facilities provided for the care of the sick, &c. In spite of this the country is still short of trained personnel at all levels.

In 1948 there were 702 doctors, 948 nurses and 918 midwives in Government service and in 1957 their numbers had increased to 938 doctors, 2,727 nurses and 1,447 midwives.

Two of the most impressive achievements of the Department of Health during this period are the near-eradication of malaria and the organised drive against tuberculosis. (These are dealt with in detail elsewhere).

The efficient re-organisation and decentralisation of the work of the Department also deserves special mention. The late Dr. J. H. L. Cumpston, formerly Director-General of Health Services of the Commonwealth of Australia, came to Ceylon in 1949 on the invitation of the Government of Ceylon “ to report on the working of the Medical and Public Health Organisation of Ceylon, and to advise the Government on the nature of the reforms and improvements required ”.

From the administrative point of view a decisive forward step was the passing of the Health Services Act No. 12 of 1952. In October, 1953, the Central Administration was set up, as provided for in this Act, supported by a Health Council which included the Director, the three Deputy Directors and five other officers of the Department to advise the Minister of Health on general policy.

At the beginning of 1954 the decentralization of the Department came into being with the creation of 15 administrative Health Districts, each under a Superintendent of Health Services. This was carried out in stages, giving progressively fuller divisional autonomy.

In 1956 Lt-General Sir Bennett Hance, Medical Adviser to Her Majesty's Secretary of State for Commonwealth Relations, came to Ceylon "to assess the progress on the implementation of the Cumpston recommendations and the reorganisation scheme of the Department and to advise further". In his report he states that the general lines of reorganisation are "in full consonance with modern ideas and are the correct approach to the health problems facing Ceylon."

22nd July, 1959.

W. A. KARUNARATNE,
Director of Health Services.

Organisation

THE Department of Health consists of three divisions—Medical Services, Public Health Services and Laboratory Services, each in charge of a Deputy Director, responsible to the Director of Health Services, who is in overall charge of the Department.

The subjects and functions of the three Divisions are as follows :

1. Medical Services

Hospitals.

Dispensaries in charge of Medical Officers.

Nurses and Hospital Midwives.

Medical Charitable Institutions.

Grants-in-aid to private medical institutions, providing facilities to the public.

Sale of opium and control of dangerous drugs.

Medical Education.

Services of Medicine, Surgery.

Obstetrics.

Dentistry, Pharmacy and Psychiatry.

Nursing Homes.

Medical Stores and Supplies.

2. Public Health Services

Study of Vital Statistics.

Control of epidemic and endemic diseases.

Maternity, Infant, and Pre-school Hygiene.

Supervision of Maternity Homes, Rural Hospitals and Dispensaries in charge of Apothecaries.

School Health Work.

Health Education and Publicity.

Sanitation.

Food Sanitation.

Railway Sanitation.

Advise to Local Authorities on Housing and Town Improvements,
Sanitary Engineering (water Supplies and drainage, Sewage disposal
&c.).

Estate Health Work.

Health Legislation.

Services of Medical Officers of Health.

School Nurses, Quarantine Officers.

Public Health Nurses and Midwives.

3. *Laboratory Services*

Medical Research Institute and its Specialist divisions.

Organisation and control of Provincial, Clinical, and Public Health
Laboratories.

Public Health Laboratory Examinations.

Medical Services

(a) Medical Services – Introductory

(b) Institutional Care

- Colombo Group of Hospitals
- Provincial Hospitals
- Base Hospitals
- District Hospitals and Cottage Hospitals

(c) Special Institutions

- Mental Hospitals
- Tuberculosis Hospitals
- Leprosy Hospitals
- Dental Institute
- Orthopaedic Institute

(d) Peripheral Units

- Maternity Homes
- Rural Hospitals

(e) Progress in Psychiatry

Medical Services

THE expansion of the Hospital Services at the base, district and provincial levels and the organisation of a network of peripheral units to provide medical facilities to distant rural areas are some of the special features in the development of the medical services of the country during the period under review.

For the medical care of the nation the Government has established Hospitals, Maternity Homes, Dispensaries and an Ambulance Service at State expense. Ordinary Out-door treatment is free at all Out-patients Departments of all Hospitals and Dispensaries. Indoor treatment is also afforded free, while there are special wards called “Paying Wards” in some hospitals, where

patients who desire a greater measure of comfort and privacy can take treatment. The Government has in this way provided an Island-wide service of a type which in many other countries is to be had only from the private sector.

The care provided is of two types : that of the general practitioner and of the specialist. In certain types of diseases like Tuberculosis, Malaria, Filariasis and Leprosy, domiciliary treatment is also provided to the people by Health Department personnel visiting the homes.



FRONT VIEW OF THE NEW FIVE STOREYED BLOCK OF THE GENERAL HOSPITAL, COLOMBO

The State pays grants towards the maintenance of certain Hospitals, Maternity Homes and Dispensaries run by private and missionary bodies, where it is satisfied that these private institutions are run primarily on a charitable and non-profit earning basis. In certain cases the state only issues free drugs to some of these institutions.

Institutional care

For institutional care there are 28,994 hospital beds in 395 hospitals inclusive of special institutions and Maternity Homes. There has been a rapid increase

of institutional beds from 18,833 in 1947 to 28,994 in 1957. On the total bed strength the ratio is 3.2 beds per 1,000 of the population. When the beds in special institutions are excluded the ratio is 2.3 beds per 1,000 population. This ratio of beds to population for a predominantly rural country such as Ceylon compares favourably with that of more advanced countries ; but the bed strength in special institutions is inadequate, as this ratio should at least be 5 per 1,000 of the population.

There were 281 Medical Institutions in 1947 and the number has increased to 395 in 1957.

			1947		1957
Special Institutions	..	..	30*	..	26
Colombo Group of Hospitals	..	..	—	..	6
Provincial District Base and Cottage Hospitals	..	..	115	..	122
Rural Hospitals ..	..	..	78	..	65
Maternity Homes	..	..	58	..	116
Peripheral Units ..	..	..	—	..	60
Central Dispensaries	..	..	281	..	395

Minor ailments are treated at the Out-patients' Departments and at the Central Dispensaries ; those requiring simple institutional care at the Peripheral Units and smaller hospitals, and those requiring more specialised type of care at the more important Base Hospitals and Provincial Hospitals.

For the quick transport of patients from one institution to another according to the treatment required by such patients a well organised Ambulance service has been provided.

* The reduction in the number of special Institutions is due to the fact that with the formation of the Colombo Group of Hospitals in 1955, special institutions like the Dental Institute, the De Soysa Hospital for Women, the Lady Ridgeway Hospital for Children and the Victoria Memorial Eye Hospital were included in the Colombo Group.

INDOOR AND OUT-PATIENTS

The following table gives the number of Indoor and Out-door Patients treated at these institutions from 1947 to 1957 :

<i>Year</i>		<i>Indoor</i>		<i>Outdoor</i>
1947	..	540,768	..	7,272,734
1948	..	662,433	..	8,332,086
1949	..	741,202	..	9,420,091
1950	..	846,001	..	11,444,206
1951	..	848,912	..	11,988,948
1952	..	842,527	..	13,288,754
1953	..	904,956	..	13,946,794
1954	..	913,034	..	15,416,023
1955	..	1,042,581	..	17,631,826
1956	..	1,144,710	..	20,633,779
1957	..	1,352,720	..	21,245,125

COLOMBO GROUP OF TEACHING HOSPITALS

The six hospitals in this group not only provide the most advanced methods of diagnosis and treatment available in the Island but also constitute the only medical teaching unit in association with the University of Ceylon. The General Hospital, as its name denotes, provides medical care in all the specialities not catered for by the other five institutions, each of which deals mainly with a single speciality.

This group taken as a whole is the next important medical institute in Ceylon. At one time, it was the only unit capable of providing advanced treatment in specialities. To-day the position is radically altered. Provincial hospitals are designed to deal with these cases and to obviate the need for sending patients from out-stations to Colombo.

Beds in Colombo Group of Hospitals

The number of beds in the Colombo Group of Hospitals is given below :

1.	General Hospital	..	..	..	1,594
2.	De Soysa Hospital for Women	..	..	..	340
3.	Castle Street Maternity Home	..	..	..	220
4.	Lady Ridgeway Children's Hospital	..	..	..	242
5.	Victoria Memorial Eye Hospital	..	..	..	200
6.	Dental Institute	..	..	..	43
					<hr/> 2,639 <hr/>

PROVINCIAL HOSPITALS

The Provincial Hospitals are intended to supply at outstations the same facilities which are now provided in Colombo by the Colombo Group of Hospitals. This implies that they will have to be completely equipped with machinery for radio-diagnosis operating theatres and laboratory &c., together with the necessary specialist staff to man them. The Health Council has recommended



A VIEW OF THE KURUNEGALA PROVINCIAL HOSPITAL

that Provincial Hospitals should be ultimately built up to a bed strength of 750, but in many cases this will not be possible owing to inadequacy of the present sites and trained personnel. There are at present nine Provincial Hospitals situated at Kandy, Galle, Jaffna, Kurunegala, Ratnapura, Badulla, Batticaloa, Anuradhapura and Colombo North.

BASE HOSPITALS

A Base Hospital is designed to have a bed-strength of 350 and to provide specialist service in General Medicine, General Surgery and Obstetrics and

Gynaecology and Paediatrics. A dental clinic is included and wherever desirable certain other specialities like Eye and X'Ray are also provided. The purpose of these Institutions is primarily to provide essential specialist medical care in areas in which Provincial Hospitals are overcrowded or do not exist.

There are 12 Base Hospitals situated at Negombo, Kalutara, Matale, Polonnaruwa, Nuwara Eliya, Matara, Point Pedro, Trincomalee, Chilaw, Kegalla, Avissawella and Mannar.

DISTRICT HOSPITALS AND COTTAGE HOSPITALS

District Hospitals are general utility hospitals in charge of a senior medical officer, in which no specialist treatment is generally provided. This is the theoretical position but many of the District Hospitals which have been referred to earlier are already functioning with some degree of specialisation as in Base Hospitals.

There are also 14 Cottage Hospitals. They are miniature District Hospitals of about 50 beds each in charge of a Medical Officer.

Special Institutions

MENTAL HOSPITALS

There are three Mental Hospitals for the care of mental patients. A House of Observation has just been completed. About 2,000 persons who are chronically insane constitute the permanent population of these hospitals. It is probable that there are an equal number outside these institutions. The beds are distributed as follows :

<i>Institute</i>	<i>Number of beds provided for</i>
M. H. Angoda ..	.. 2,158
M. H. Mulleriyawa	.. 250
M. H. Pelawatta ..	.. 278
H. O., Mulleriyawa	.. 500

TUBERCULOSIS HOSPITALS

When a person who has been examined at a Chest Clinic is found to require institutional treatment he is sent either to a specialised Tuberculosis Hospital

or to a Ward attached to a General Hospital according to the seriousness of the case. The beds are distributed as follows :

<i>(a) Chest Hospitals</i>				<i>Number of beds</i>
1.	Welisara	..	..	709
2.	Ragama	..	..	586
3.	Kandana	..	..	320
4.	Four other Hospitals	..	..	508
				<hr/> 2,123
<i>(b) Others</i>				
	T. B. Wards in General Hospitals	..	..	1,377
				<hr/> 3,500

These figures do not include 180 beds in the Mental Hospitals at Angoda.

LEPROSY HOSPITALS

There are two Leprosy Hospitals and one Colony. The bed strength is as follows :

<i>Institute</i>				<i>Beds</i>
	Hendala Hospital	..	..	630
	Mantivu Hospital	..	..	265
	Uragaha Colony	..	..	45
				<hr/> 940

DENTAL INSTITUTE

There are 43 beds for indoor treatment. These are provided at the General Hospital Colombo.

ORTHOPAEDIC INSTITUTE

Orthopaedic services are provided only at the General Hospital, Colombo. This Unit has a trained staff and 50 hospital beds.

Peripheral Units

The simplest type of medical institution is what has come to be designated the Peripheral Unit, consisting of a Central Dispensary, a Rural Hospital, and a Maternity Home.

But none of the medical institutions work in isolation. A Group of peripheral units is located around and is catered for by a district hospital. Similarly a group of district hospitals is served by a provincial hospital. A good ambulance service is provided and most of these institutions are connected by telephone.

At the beginning there was only the Central Dispensary. Central Dispensaries were for the most part established in remote rural areas. They serve as outposts of the Government Medical Service and are primarily intended to render outdoor medical treatment.

MATERNITY HOMES

With the great impetus given to Maternity and Child Welfare Work by the Health Units which had covered nearly the entire country (1937), the untrained village midwife was gradually eliminated. It soon became evident that certain areas, which were hilly and covered with jungle could not be served by the domiciliary service. The Maternity Home (1938) was therefore evolved to provide accommodation for expectant mothers residing in these areas, to whom the field midwives could not render efficient service during the ante-natal and post-natal periods due to difficult terrain or dispersal of population.

These Maternity Homes unfortunately could not be restricted to the areas for which they were originally intended. For administrative reasons it was found most convenient to locate the Maternity Home on the same premises as the Central Dispensary.

RURAL HOSPITALS

The Rural Hospital was a later development. It consists of about 20 beds intended for minor cases of illness and for the observation of cases.

In the rural areas, these Peripheral Units are both preventive and curative in function. Most of these are under the charge of fully qualified Medical Officers, and in these units the Medical Officer is in charge of personal services in relation to maternity and child health, while the Maternity Homes in his area are in direct charge of Public Health Midwives.

These Medical Officers are carrying out integrated work. The remaining Peripheral Units are in charge of specially trained Apothecaries. In these units also the maternity and child health work is integrated with the exception

of abnormal midwifery for which the Apothecary is not trained or adequately equipped to deal with. In such cases the assistance of a Medical Officer is sought.

Progress in Psychiatry

The care and treatment of those mentally ill have shown an exhilarating rate of expansion during the last decade. Prof. Mapother who visited the Island in 1938 to report on the Mental Services of the Island, has furnished a valuable report which was published as Sessional Paper No. XIII of 1938 in September, that year.

On the recommendations made by Prof. Mapother three officers were sent to specialize in this branch of medicine and on their return were posted for work at the Mental Hospital, Angoda. This was the only institution in existence at the time with a total patient population of about 3,000 in charge of a Medical Superintendent, and three Doctors. It is a far cry from that time to the present.

Today the staff number twenty-two Doctors—A Medical Superintendent, a Deputy Medical Superintendent, seven Psychiatrists and twelve assistant Medical Officers. Let us look down the vista of time and analyse the gradual but encouraging transformation.

THEN AND NOW

If at any given time in the community the practice of Psychiatry depends on the assumption that there are gross irreversible differences between the mentally ill and the others in that society then segregation of patients occur with protection of the community as its aim. For the protection of the others in the society—segregation of the ill then occurs. Treatment is from this angle entirely custodial—that is to say the patient is kept protected from harming himself and others and attention is paid only to his bare requirements of food, clothing and personal cleanliness. This was the attitude towards the mentally ill in the era immediately preceding.

A MORE ENLIGHTENED VIEW

In the decade under review a more enlightened and hopeful attitude towards the mentally ill has been developed and the emphasis where the care and treatment of patients are concerned, has shifted definitely from a custodial role to a therapeutic one.

No longer is the protection of the community the sole criterion for the segregation of patients. The differences between these mentally ill and the others in Society are now considered reversible. It is not without significance that

even the word "Asylum" has been statutorily replaced by the more human connotation of "Hospitals". The control of the restless patient has taken on a more kindly attitude, and the emphasis placed on the treatment of the mental disorder.

PROGRESS IN TREATMENT

If there is one word which has loomed into importance during these last few years, in connection with the mentally ill, there is no doubt whatever that it is the word "Treatment". Today the entire hospital is divided into Units, each Unit being placed in charge of a Psychiatrist and an assistant Medical Officer ; and most of the recent discoveries in the treatment of the mentally ill practiced in Europe and America are available in this Hospital.



A PATIENT BEING GIVEN ELECTRO-SHOCK THERAPY

Electro-Shock therapy and Insulin shock therapy—the sheet anchor in the treatment of a large proportion of patients—is now a common place. There are three special wards in the hospital set apart entirely for patients undergoing Insuling Shock Therapy and each morning there is an average number of

90 patients subjected to this type of treatment in these wards. Electro-Shock therapy is administered in each Unit. Where previously there was only one Electro-Shock apparatus for the whole hospital, there are now nearly 20.

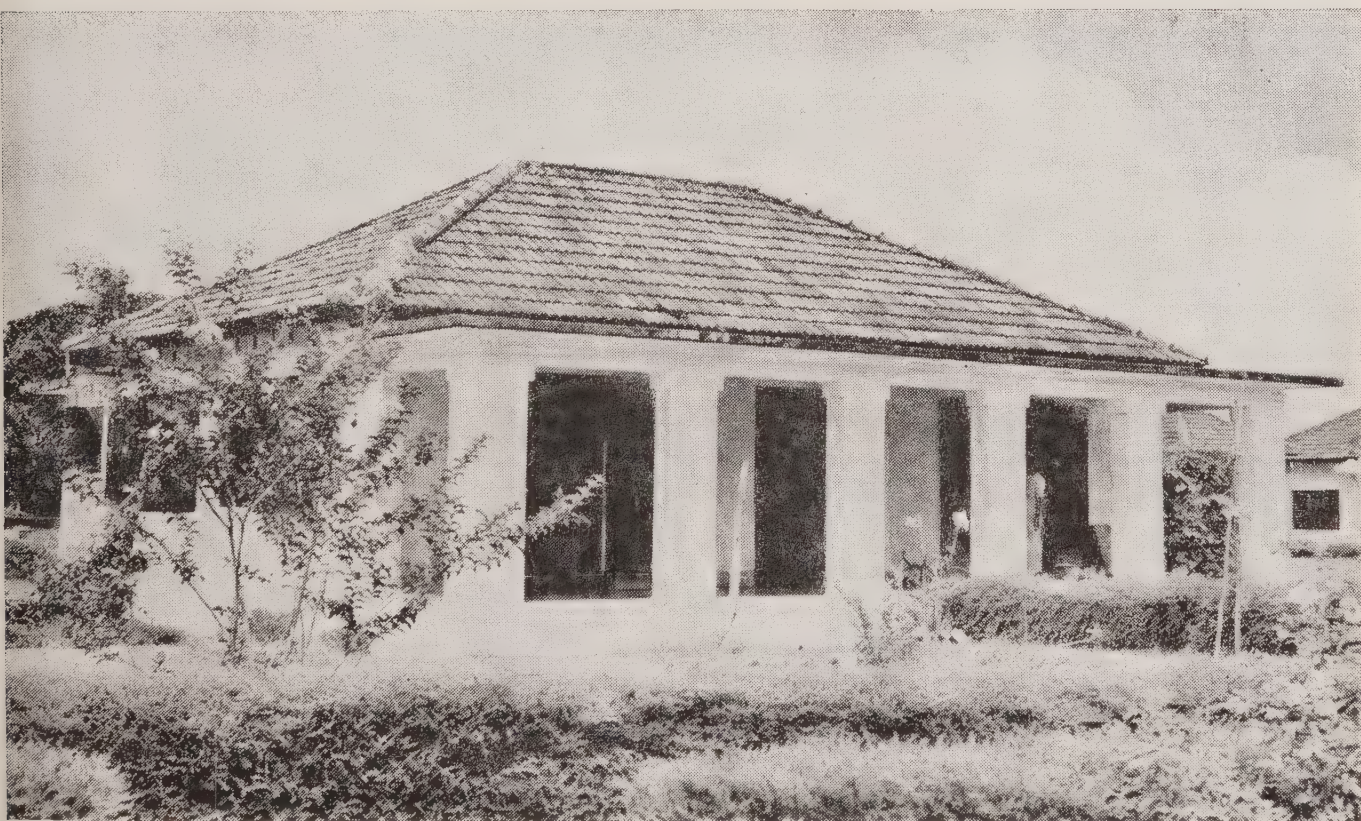
Every admission into hospital, especially if it is the first attack of illness in a young patient is now subjected to some form of active treatment. The results of such treatment are reflected in the increased discharge rate and the return to normal life of a large proportion of patients. Even so perhaps because of this namely, the realisation by the public that active treatment is now possible and is being carried out in the Mental Hospital, the admission rate has increased to nearly double what it was 10 years go.

4,500 PATIENTS

The present hospital population is in the region of 4,500. Ten years ago there was an average of about 3,000, the others, there is little doubt, being scattered around the various Ayurvedic Institutions that specialise in mental diseases. The one at Neelamahara lying on the out skirts of Colombo normally houses about 30 patients undergoing treatment by the Priest in charge. The patients are housed in a sort of a "Villa" system—where each patient and some of his relatives lease out a small cottage on the premises.

VILLAS FOR PATIENTS

It is therefore interesting to note that where previously the patients in the Mental Hospital were housed in the wards accommodating on an average



PICTURE OF A 'VILLA' AT THE MENTAL HOSPITAL, ANGODA

about 150 patients in each ward the tendency now—as in all progressive Mental Hospitals the world over—is to build just this type of cottage where patients could be housed individually.

In conformity with this practice a set of cottages called “Villas” were built at Angoda where patients could be treated and housed in separate rooms.

“ DAY ” HOSPITAL

A further modification of this principle is being tried out at present namely what has been described in the recent literature as the “Day Hospital”. The patients with one or two of his relatives are brought into hospital in the morning where treatment like Electro-Shock or even “Modified Insulin” is given here. He is kept in hospital for the greater part of the morning hours under supervision of the trained staff and returned home on the interruption of the day’s treatment. This method has been tried out during last year. The patients, especially the early Psychotics and those suffering from the Psychoneurosis, prefer this to the usual hospitalization, and there is less drain on the available space in the hospital.

From the therapeutic angle the patient is in contact with his family Unit throughout the treatment and therefore resocialization to his environment proceeds “pari passu” with his recovery ; unlike in the hospital treated patients where such resocialisations must await his recovery from his illness and possibly, return to the family milieu. The advantages of such a practice are obvious in a country where there is a dislike to admit early cases to a hospital which is not without a social stigma and also make available to the more recalcitrant patients the beds in the hospital that are just sufficient to go round.

NEW DRUGS

During the last few years the treatment of mental illness by various new drugs discovered and chemically produced (synthesised) has added fresh enthusiasm in the treatment of these diseases. Drugs like largactil and Serpasil are freely used.

In passing it is of great interest to note that serpasil is an extract from the plant “Ekaveriya” (එකාවේරිය) used from ancient times by some of the Ayurvedic Physicians of India and Ceylon in crude form for the treatment of this very illness. Could this be only a fore-runner of the great benefits that could accrue to mankind if only Physicians of both the Eastern and Western systems of medicine meet each other in a spirit of great humility, a sincere desire to learn and above all to serve and help the suffering.

PREVENTION AND AFTER-CARE

Whilst much is being done in the actual treatment of the Mental illness, the preventive aspect and the after-care of patients have shown a similar progress.

Where previously there was only one Out-patients' Clinic at the General Hospital, Colombo for Psychiatric patients there is today a Psychiatric Clinic of some sort or another every day run by a qualified Psychiatrist at the General Hospital and other clinics in distant hospitals like the Leprosy Hospital and the Kalutara Child Guidance Clinic. In these clinics the early cases are diagnosed and attempts made to prevent the full blown illness whilst the prophylactic or the preventive aspect is attended to, especially in the Child Guidance Clinics.



OCCUPATIONAL THERAPY—PATIENTS ENGAGED IN BASKET MAKING

OCCUPATIONAL THERAPY

After such periods of treatment the recovered patient is not left to find for himself but brought back to society and resocialised by putting him to do work called Occupational Therapy—which is resorted to as part of the treatment itself and often as after-treatment. Here the patient is gradually put back to do the work he is accustomed to. The Mental Hospital has for this purpose a farm attached to it where recovered patients work tending the cattle, milking the cows and doing all other work associated with the farm. Today there are over 60 head of cattle in the farm.

The hospital has also a workshop under a trained Occupational Therapist where filligree work and rattan basket making are taught to patients. Another building is under construction entirely by the patients themselves to house these expanding Units.

In resocialising these patients after a mental illness the aim is to get them back into the Society and kind of life they were leading previous to the mental illness. The farm therefore is able to offer the patients this in the fullest measure.

A brief summary has been attempted of the considerable progress made in the prevention, cure, and after care of the mentally ill during the period of these ten years. The progress may not have been spectacular, but it has nevertheless been marked, steadily consolidating the gains made and advancing on all fronts with the confidence of being able to tackle the problem. With the increase in staff and specialisation of its members with the new hospitals for the mentally ill now under the construction at Mulleriyawa and approaching completion, with the Branch Hospital, for the chronic Mental patient at Pelawatta which is now in existence as a going concern, the advances made in this field cannot by any means be belittled. However, a great deal more remains to be done before workers in this field can look back with any sense of satisfaction.

Public Health Services

- (a) **Public Health Services – Introductory**
- (b) **Your Surroundings and your Health**
- (c) **The Problem of Nutrition in Ceylon**
- (d) **Care of the Mother and Child**
- (e) **Care of the School Child**
- (f) **Health Education**

Public Health Services—Introductory

“ Public Health is the science and the art of preventing disease, prolonging life, and promoting physical health and efficiency through organised community efforts for the sanitation of the environment, the control of infections, the education of the individual in principles of personal hygiene, the organisation of the medical and nursing services for the early diagnosis and preventive treatment of disease, and the development of social machinery which will ensure to every individual in the community a standard of living adequate for the maintenance of health”.

—Winslow

PREVENTIVE health services were started in Ceylon on scientific lines with the establishment of the first Health Unit at Kalutara. Following the disastrous Malaria Epidemic of 1934–35 a preventive health organisation was set up throughout the Island and considerable progress has been made in the prevention of disease and the promotion of health.

Apart from the special campaigns such as those for the control of Malaria, Tuberculosis, Venereal Diseases, Leprosy, Filariasis, &c., the main feature of the Public Health work has been the adoption of the Health Unit types of work throughout the country. In this method of work a full time Medical Officer of Health, who is debarred from private practice, is placed in charge of all the health activities within a limited area. He is assigned a subordinate

staff of Public Health Nurses, Public Health Inspectors, Public Health Midwives and minor personnel, all assessed on a population and geographical basis. Public Health Inspectors and Public Health Nurses are appointed on the basis of one per 8,000 to 10,000 of the population.

HEALTH UNIT WORK

A Health Unit of approximately 50,000 population will, therefore, have a Medical Officer of Health in charge, four to five Public Health Inspectors, and eight to ten Midwives. A large proportion of the subsidiary personnel is available now except for Public Health Nurses who are still in very short supply.

The activities of a Medical Officer of Health in charge of a Health Unit comprise the following six routine items of work :—

- (i) Administration ;
- (ii) Collection and Study of Vital Statistics ;
- (iii) Environmental Sanitation ;
- (iv) Epidemiology ;
- (v) Maternity and Child Welfare including School Health Work.
- (vi) Health Education.

The Health Areas of the Island which were set-up soon after the Malaria epidemic during 1934–35 were re-defined to coincide with areas of Divisional Revenue Officers. This decision was taken as Malaria Control had reached a stage when it no longer requires smaller areas to be in-charge of Health Officers. It was also difficult to find Medical Officers who were willing to undertake Public Health work. In fact, many of them who were compulsorily recruited for Health work took no interest in such work, with the result work in areas they were in charge of deteriorated. Based on Cumpston's report, a modified scheme of Public Health work in the country was therefore evolved. The entire Island was divided up into 97 Health Areas—44 areas were in charge of Medical Officers of Health, 47 areas in charge of Supervising Public Health Inspectors, 3 areas in charge of District Medical Officers and 3 Municipal areas. In the Health areas in charge of Supervising Public Health Inspectors the Personal Health Services are attended to by Medical Officers in charge of Peripheral Units and Medical Officers attached to Hospitals. The Supervising Public Health Inspectors supervise the work of Public Health Inspectors and also do office administration work.

IN AREAS OF LOCAL AUTHORITIES

There are 7 Municipal Council areas ; 35 Urban Council areas ; 23 Town Council areas ; and 292 Village Committee areas. There are only 3 Municipalities which employ their own Public Health staff. The Central Government

has loaned the services of a Medical Officer of Health to the other Municipal Councils and Urban Councils. The Town Council and the Village Committee areas are looked after by Medical Officers of Health and Supervising Public Health Inspectors of the Department. Some of the Municipal Councils, Urban Councils and Town Councils have appointed their own Public Health Inspectors and Midwives. Public Health Inspectors to all other Municipal, Urban and Town Councils are loaned on a subsidised basis by the Central Government. The Municipal Councils, the Urban Councils and the Town Councils have all appointed their own Midwives. The Public Health Inspectors of the Department work in Village Committee areas and no subsidy is paid for their services by the Village Committees. The Village Committees however subsidise the payment of Midwives employed in their areas. It has been decided that all Local Authorities except Village Committees should progressively appoint their own staff out of their funds.

CONTROL OF COMMUNICABLE DISEASES

Ceylon is comparatively free from major infectious diseases like plague, cholera, smallpox, typhus and yellow fever. Plague has not occurred since 1938 as the result of the HCN fumigation of rice and other flea-infected cargo imported from plague endemic ports. Since 1943 there were no cases of cholera. Smallpox occurs occasionally and sometimes breaks out in epidemic form. The infection is always introduced from India. Still a considerable amount of preventible illnesses occur in the Island. These are mainly bowel infections such as typhoid, dysentery and diarrhoea, poliomyelitis and infective hepatitis and worm infestations which can be eliminated by improving environmental sanitation.

It has been possible to keep the Island free of major infectious diseases through the quarantine measures adopted at ports of entry, in respect of passengers coming from infected countries, and due to other public health measures adopted throughout the country. However, the present organisation is not considered sufficient to deal with the infectious diseases that are still endemic. Therefore it has been decided to establish a separate subdivision under the Division of Public Health Services to control communicable diseases and other diseases which are dealt with by Specialised Campaigns.

There are five Specialised Campaigns for dealing with Communicable Diseases which form special problems in the country, such as, Malaria, Tuberculosis, Venereal Diseases, Leprosy and Filariasis. Each of these Campaigns is in charge of a Superintendent. The work of these Campaigns is closely integrated with the work done by Health Officers in the Island. As a result of the activities of the Special Campaigns considerable success has been achieved, and the country has now launched a Malaria Eradication Scheme.

Your surroundings and your Health

ENVIRONMENTAL SANITATION

It is not possible to think of a human being apart from the environment in which he lives. It is this environment which gives him the possibility of growing the food essential for his subsistence ; of making the shelter he needs to raise his family and pressure the clothing necessary to protect him and other members of his family from adverse climatic conditions. He depends so much on his environment that his very life is moulded by it.

This environment which is so indispensable to his life is also the agent through which many diseases may reach the healthy man. The water which he drinks may convey a number of diseases, and the soil which he cultivates may harbour and breed harmful germs.

The over-crowding in hospitals all over the Island, including the General Hospital, Colombo, has been the subject of much study by experts from the W. H. O. and other International Organisations and all of them have come to the same conclusion that this over-crowding is due chiefly to the large number of cases of bowel diseases such as typhoid fever, dysentery, hookworm and other worm infestations.

The cause for this alarming incidence of these bowel diseases has been known and re-iterated over and over again as being due to what is conveniently known as unsatisfactory environmental sanitation. Therefore, the sanitary control of the environment is one of our most important public health problems. The factors that have to be dealt with in a programme of environmental sanitation are :—

- (a) Disposal of excreta.
- (b) Pure and wholesome water supply.
- (c) Hygienic housing to prevent the spread of disease and to encourage healthy habits.
- (d) Pure food supplies.
- (e) Control of insect vectors of disease.
- (f) Cleanliness, both public and personal in relation to disease.
- (g) Home accident prevention.

Only a very small proportion of the people have a protected source of water supply. Only 5 out of 7 Municipalities, 14 out of 34 Urban Councils, and 9 out of 38 Town Councils have pipe-borne water supplies. Even in the case of these, their adequacy and purity are questionable. In Rural areas the position is infinitely worse.

As regards the disposal of excreta about two-thirds of the houses do not have a sanitary latrine. Even in the principal city of Colombo only two-thirds of the population is provided with a water-borne system of sewage disposal.

Slow Progress : For nearly fifty years the sanitary environment dominated this Department's approach to most problems of Public Health in the community. The progress has been disappointingly slow and where water supply is concerned the position is much worse. Where no wells are available the ignorant rural population obtain its domestic water supply from any pond or field or a hole dug by the side of a paddy field. Every one of the millions of wells, springs, streams which supply rural homes is vulnerable to contamination.

The two main factors of Environmental Sanitation that require immediate attention are the provision of good water and satisfactory facilities for the disposal of excreta.

SINCE 1937

Environmental Sanitation has received the special attention of the Departmental officers since the inauguration of the All Island Malaria and Health Scheme in 1937. The five-point Rural Health Scheme which was introduced as part of the Health Campaign laid down the following as essentials for a healthy rural home :—

- (a) A well ventilated house.
- (b) Boiled, cooled water for drinking.
- (c) A sanitary latrine.
- (d) A manure-pit, and
- (e) A kitchen garden.

However owing to the fact that the Department of Health has no direct responsibility for the provision of adequate "Environmental Sanitation" facilities for the urban and rural areas of the Island— this being the responsibility of the Ministry of Local Government together with the Ministry of Home Affairs and Rural Development, the latter to a lesser degree—it has not been possible to make much headway.

The Department, however, gives necessary technical advice and places the services of its trained Medical Officers of Health, Public Health Engineers, Public Health Nurses, Public Health Inspectors, and other trained health personnel, at the disposal of the local authorities in charge of Urban Councils, Town Councils, and Village Committees.

A memorandum stressing the importance of Environmental Sanitation was submitted to the Health Ministry, in 1954. It was found that there were nearly a million houses in Ceylon without proper latrines and that the water supply both in rural and urban areas was not up to the desired standard of safety.

Expert Advice : For the purpose of improving Environmental Sanitation, the services of an Expert were obtained in 1954 from the W. H. O. to advise the Government of Ceylon. He examined this question and has recommended—

- (i) the creation of a National Water Board to conserve and develop the water resources of the country so as to make safe water available to the people ; and
- (ii) the carrying out of two Environmental Sanitation Pilot Projects in the Dry and Wet Zones.

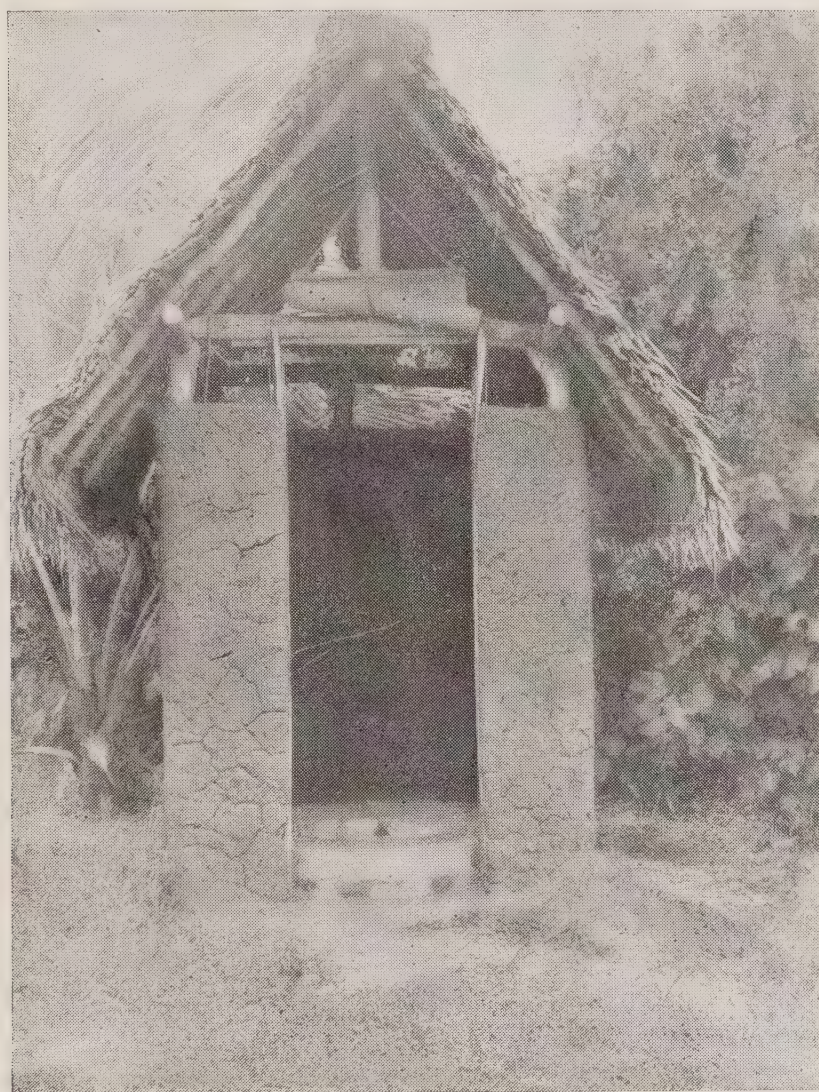
Pilot Project : A Pilot rural Environmental Sanitation Project was accordingly started in the Kurunegala area in July, 1955, under the guidance of a W. H. O. Engineer.



“ PROTECTED WELL ” WITH HAND PUMP AT THE ENVIRONMENTAL PROJECT, KURUNEGALA

The objectives of the projects were—

- (a) to improve the rural water supplies and to improve methods of disposal of excreta in the rural areas ;
- (b) to educate the rural population as regards the nature of intestinal diseases and the means by which their transmission may be controlled ;



A TYPICAL RURAL LATRINE IN THE ENVIRONMENTAL PROJECT AT KURUNEGALA

- (c) to devise simple, practicable and economical sanitary works—to test their applicability on a pilot scale in the Kurunegala region and to extend their use when experience proves them to be practicable ;
- (d) to train rural officers in Environmental Sanitation utilizing the pilot project at Kurunegala as a field training area.

Progress of the Scheme : The progress so far made in regard to this scheme is summarised in the following extracts from the Administration Report of the Director of Health Services for 1957 :—

(a) “ Environmental Sanitation still remains the chief Public Health problem in Ceylon. The over-crowding in hospitals all over the Island including the General Hospital, is due chiefly to the large influx of bowel disease from bacterial and parasitic infection of excreta.

(b) “ The Environmental Sanitation Pilot Project at Kurunegala was continued in the Dry Zone with UNICEF and W. H. O. assistance. The Wet Zone Project could not be put into operation due to lack of staff. The progress of the Project has been satisfactory and an efficient organisation and procedure for performing rural sanitation work has been developed.”

Progress in developing effective techniques for inducing the rural public to accept and use the sanitary facilities provided has also been made. The project has also been helpful in training personnel, and also in demonstrating the effect of improved sanitation in the health of the rural population.

The procedure of work carried out by the Project can be considered to occur in three phases—surveys, pilot operation and full scale work. In all phases the Public Health Inspector (P. H. I.) who heads the Education and Construction Units is the Chief Operator.

- (i) In the first phase surveys were made. The survey consisted of an attitude survey, a sanitary survey and a materials survey by the P. H. I. and a geological or ground water survey by the Engineering Staff.
- (ii) In the second phase the P. H. I. began the work of organised public co-operation by acquainting the public with the projects aimed at all public meetings. This was continued by the organisation of special public meetings in the neighbourhood to discuss sanitary problems with project staff. Such neighbourhood meetings were easy where the people felt the need for additional water supply which the project can supply.

During the second phase the P. H. I. constructed some experimental sanitary facilities.

- (ii) After the completion of the surveys and after experiment and the initial sanitary education of the public, full scale construction and education work was begun.

Rural Sanitation Scheme : Work in connection with Rural Sanitation Scheme is being continued by All Health Officers. Of late the use of boiled cooled water is being specially stressed as the most simple method of controlling

bowel diseases. 216,311 houses were worked under this scheme in 1957 as against 153,860 houses in 1947 and 81 per cent. of these household used boiled cooled water for drinking purposes.

Future Programme : The future developments will depend on the reorganisation of the Public Health Engineering Division in regard to Environmental Sanitation. As soon as it is done it would be possible to plan ahead a long range policy regarding the expansion of the programme. Every effort is being made to speed up the work on the Kurunegala Project and to train the requisite number of personnel required for the programme.

The Problem of Nutrition in Ceylon

One of the earliest observations regarding malnutrition in Ceylon was that of Dr. D. C. de Fonseka, one time Senior Medical Officer of Health of the Department, who noticed that a skin eruption, which was one of the manifestations of a condition known locally as “mandama” was cured by cod liver oil. He suggested that it was caused by deficiency of vitamin A.

Early in 1933 Dr. L. Nicholls, Director of the then Bacteriological Institute (the present Medical Research Institute) who was asked to investigate an affliction of the skin occurring among prisoners recognised the same condition, which he termed Phrynoderma (toad skin). He too associated it with their poor diet and concluded that it was probably caused by a deficiency of vitamin A. He made further investigations amongst inmates of other institutions such as asylums and orphanages, and among free school children, and concluded that malnutrition is widely prevalent in Ceylon.

EARLIEST REPORTS

The earliest reports on the Nutritional Problems in this country are found in Sessional Papers II and XXIX of 1937, containing the results of research work done by Dr. Nicholls and also the analysis of several foodstuffs and leafy vegetables commonly used by the people of this country, carried out by him in London.

In 1938 a Division of Nutrition was established at the Bacteriological Institute. Much original work was done. Nutritional and dietary surveys were conducted and additional information collected regarding the state of nutrition of the Ceylonese.

Much propaganda was carried out, and the increased interest in nutrition of the officers of the Department has been followed by a general realisation of the importance of an improvement in the Ceylonese diet.

DIETARY SURVEYS

Dietary and nutritional surveys among various groups of people comprised some of the earliest research of the Department. Similar surveys have been carried out from time to time in later years. The earliest dietary surveys were computed on a man unit basis which is more appropriate for evaluating the adequacy of consumption of all nutrients.

The survey of a different type was the Goitre survey conducted in 1948. The survey which was designed to ascertain the distribution of goitre in the country showed that it was more prevalent in the wet zone. The findings were later confirmed by Dr. Dagmar Wilson of the F. A. O.

DEFICIENCY DISEASES

Among the diseases primarily attributed to malnutrition in this country are :

- (1) Karotomalacia, which is a serious affliction of infants and young children and a high percentage of blindness in children is attributed to this disease.
- (2) Phrynoderma—a skin condition caused by lack of vitamin A in the diet.
- (3) Malnutrition in general which causes general debility and lowered resistance to disease.
- (4) Kwashiorkor or “Mandama”—a disease of childhood primarily due to protein deficiency in the diet. A large number of registered deaths each year is attributed to this cause.

AMONG SCHOOL CHILDREN

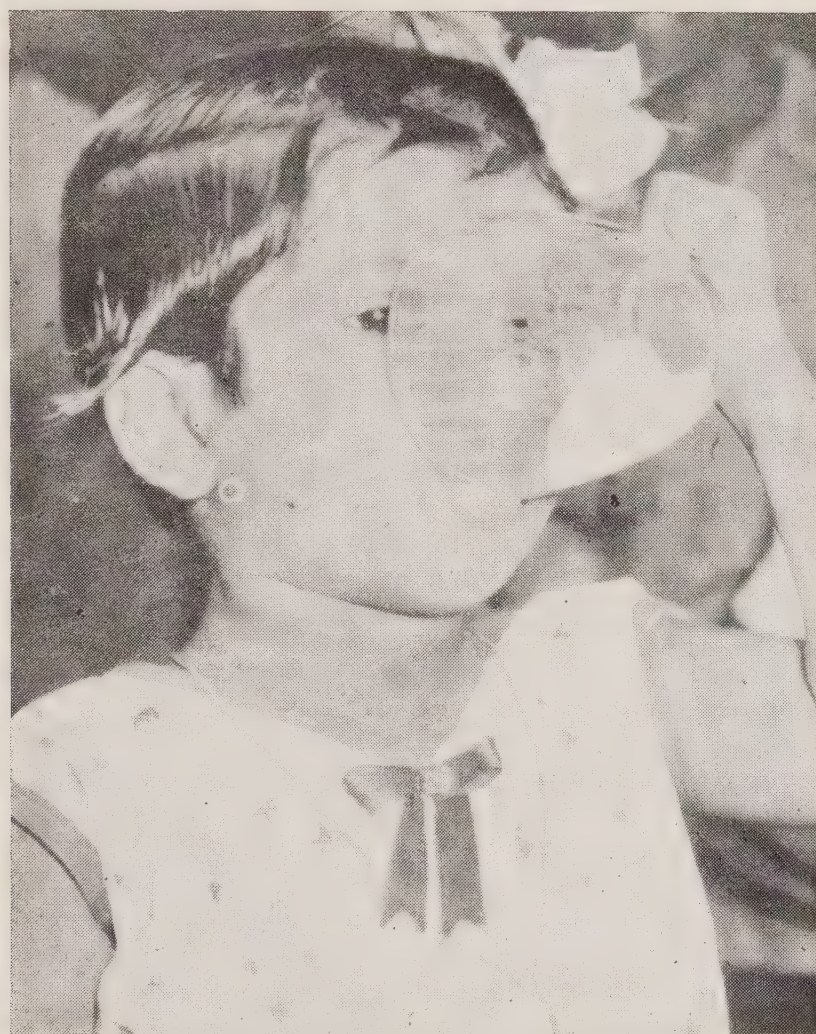
To determine the nutritional status of school children in this island a nutritional survey was carried out in certain selected areas and a total of 18,592 pupils were examined. 9,392 were boys and 9,200 were girls. This survey determined the incidence of angular stomatitis, erosion of the tongue, Bitot's spots and phrynoderma. According to these deficiency signs, the nutritional status of the pupils was estimated. It was found that 11·7 per cent. of the boys and 10·7 per cent. of the girls examined showed nutritional deficiency. More boys had angular stomatitis and Bitot's spots, while more girls showed phrynoderma. As regards malnutrition the boys were significantly more affected.

The assessment of nutrition according to height and weight was also determined. It was found that 24 per cent. of the boys and 27·6 per cent. of the girls were nutritionally sub-standard. The investigation will be continued as it will help to assess any change in the nutrition due to wide spread distribution of skimmed milk in schools.

PRESENT POSITION

The present position is well summarised in the following extract from the Administration Report of the Director of Health Services (Dr. D. L. J. Kahawita) for 1957 :—

“ The wide spread prevalence of general malnutrition has not been adequately dealt with except in the reported cases where the condition has progressed to cause severe symptoms to be encountered by the clinicians. A variety of diseases, the outcome of poor diet, have been met with as usual in the hospitals and dispensaries. An adequate diet is necessary here not only to prevent nutritional diseases per se but other diseases as well.



A CHILD TAKING MILK AT A MILK FEEDING CENTRE

“ There are two Government Milk feeding programmes which are likely to make a notable impression in the years to come on the widespread prevalence of malnutrition in the different population groups, provided they receive no setback by difficulties of State finance.”

“ One is the midday meal which includes a glass of milk provided by the Department of Education to the school child and the other is the free distribution of milk particularly to the pre-school child at the 3,193 milk feeding centres that catered to them in 1957.

“ The ‘ Free Milk Feeding Scheme ’ of the Department of Food was taken over by the Department of Health Services in January 1957, and was run as the ‘ Milk Distribution Scheme ’ to pre-school children and mothers. The scheme is being operated by this Department as a measure to counteract malnutrition and not just as a feeding scheme for the needy though this aspect of it is not being overlooked.

“ During the course of the year as many as 1,352 centres were distributing fresh milk instead of skimmed milk for which most have a prejudice. This change-over has encouraged the local dairy industry which will help the people to become a milk drinking nation as the present consumption of milk is the lowest per head of population for any country in this region.

“ A vast amount of information is lacking in this country in the field of nutrition as the relation between the available local foods and the requirements of the body have not been so far examined by food experts. The nutritional aspects of growth and development of infants and children, pregnancy, lactation, aged periodontal diseases and dental caries remain uninvestigated as yet, in relation to foods available locally and consumed by the people and their food habits ”.

EXPERTS' FINDINGS

Recently the nutritional position was studied by Dr. F. W. Clements from the W. H. O. and Mrs. Laurel Bocobo from the F. A. O. They found that the national food supplies provided an average of 2,000 calories per person per day : that this calorie level was approximately equal to the pre-war levels and that the diets consisted predominantly of cereal and starchy foods and was low in calcium and vitamin A.

Their estimation of the calorie requirements at the rural level showed a deficiency of, approximately, 250 calories per person per day. The protein consumption averaged 42·2 grams per person, per day, and these proteins were chiefly derived from cereals, starchy roots and tubers. This was slightly less than the pre-war consumption and on the calculated requirements of 44 grams protein, per day, the food consumption showed a deficit of 1·8 grams, per day.

They also found that many members of families in well defined groups, such as pregnant women, infants and young children, were not getting enough to eat. They estimated that 50 per cent. of pregnant women were not receiving

sufficient calories and 40 per cent. ate a diet low in protein. Further, 50 per cent. of the children, up to 18 months of age, appeared to show signs of protein deficiency. This was mainly due to the absence of a satisfactory traditional method of feeding and to the inability of mothers to purchase sufficient infant foods.

Care of the Mother and Child

Maternity and Child Health work constitutes one of the most important activities, if not the most important activity of the Public Health Service ; started on an organised basis with the inauguration of the first Health Unit at Kalutara in 1926, the work has progressed rapidly.

The importance of this work in relation not only to the well-being of the individual but also to the national health is being increasingly realised. Therefore special attention has been given in greater measure to the securing of maternal care in all its aspects—antenatal, natal and pre-natal.

Among the more recent measures were the arrangements made for the hospitalisation of these expectant mothers whose haemoglobin index was below 40 per cent. and the treatment of anaemia by adequate ante-natal care and the providing of liver extract preparations where necessary.

The success of the work undertaken for the care of the mother and child is evinced by the progressive reduction of the maternal death rate from 10·6 per 1,000 live births in 1947 to 3·7 in 1957 and the infant death rate from 101 to 68 during the same period.

This work is carried out at Clinics by the Medical Officers of Health and Public Health Nurses, and also by Public Health Nurses and Public Health Midwives during their home visits.

CLINICS

Health education, which is the basis of modern health work, could best be imparted to mothers and children who come into clinics, and to children who are attending school. At the Maternity and Child Welfare Clinics it is possible not only to carry out health education in regard to the care of the mother and the child, but also of the family as a whole, and subjects such as Sanitation, Nutrition, Communicable Disease Control, &c., can always be linked up with problems associated with the mother and the child.

Health Centres and Clinics

The following figures show how clinic work has developed since 1947 :

	1947	1957
Number of Health Centres ..	572	829
Number of Clinics held ..	16,591	32,153
Number under Care—		
(i) Expectant Mothers ..	180,834	486,152
(ii) Infants ..	96,739	383,444
(iii) Pre-School Children ..	144,874	212,159

In maternal care work particularly, there is the opportunity to win the confidence of a mother and to render her service at a time when such service is greatly appreciated ; the individual is in a receptive mood and hence it is possible, both by individual and group instruction, to inculcate the elementary principles of hygiene better than at any other time.

The work of the Medical Officer of Health, the Public Health Nurse and the Public Health Midwife falls into two categories, viz, service rendered at home and service at institutions such as Maternity Homes. Rural Hospitals and Health Centres. They can best be classified as Domiciliary and Institutional.

MATERNITY WORK

The services offered for the welfare of the expectant mother during the three periods of motherhood, viz., pre-natal, natal and post-natal, aim at preventing diseases and reducing maternal deaths. The main causes of maternal death as reflected from the work done in Ceylon, are haemorrhage and toxæmia, while hookworm, and malnutrition predispose the mother to pre-eclamptic states. The aim of our scheme has therefore been to wipe out these or prevent them.

MATERNITY HOMES

The first Maternity Home was established in 1937, and now there are 122 Maternity Homes run by the Department. The numerous requests received from the public for the establishment of new Maternity Homes are a clear indication of their popularity. A significant change of recent origin in the policy of establishing these Homes has been the reversion to the original proposal to establish them in association with Central Dispensaries and Rural Hospitals, so that they do not function in isolation.

The W. H. O. and UNICEF have also given considerable importance to this phase of Public Health work, and this country has received considerable assistance from these two agencies.

During 1952 the Ministry of Health directed that effect should be given to the following recommendation regarding the work contained in Dr. Cumpston Report :—

“The work of maternal and child welfare is almost entirely clinical and it should be transferred to the control of the Director, Division of Medical Services ; it should be based upon, and wherever possible be located at the hospital for the district ”.

In accordance with these instructions Maternal and Child Health work was handed over to curative Medical officers in two areas in 1952 : Dambulla and Matara.

Following the re-organisation and decentralisation of the Health Services in 1954 and the consequent integration of curative and preventive, this work is now carried on at the Medical Institution. This integration is most in evidence in the work of the Peripheral Units.

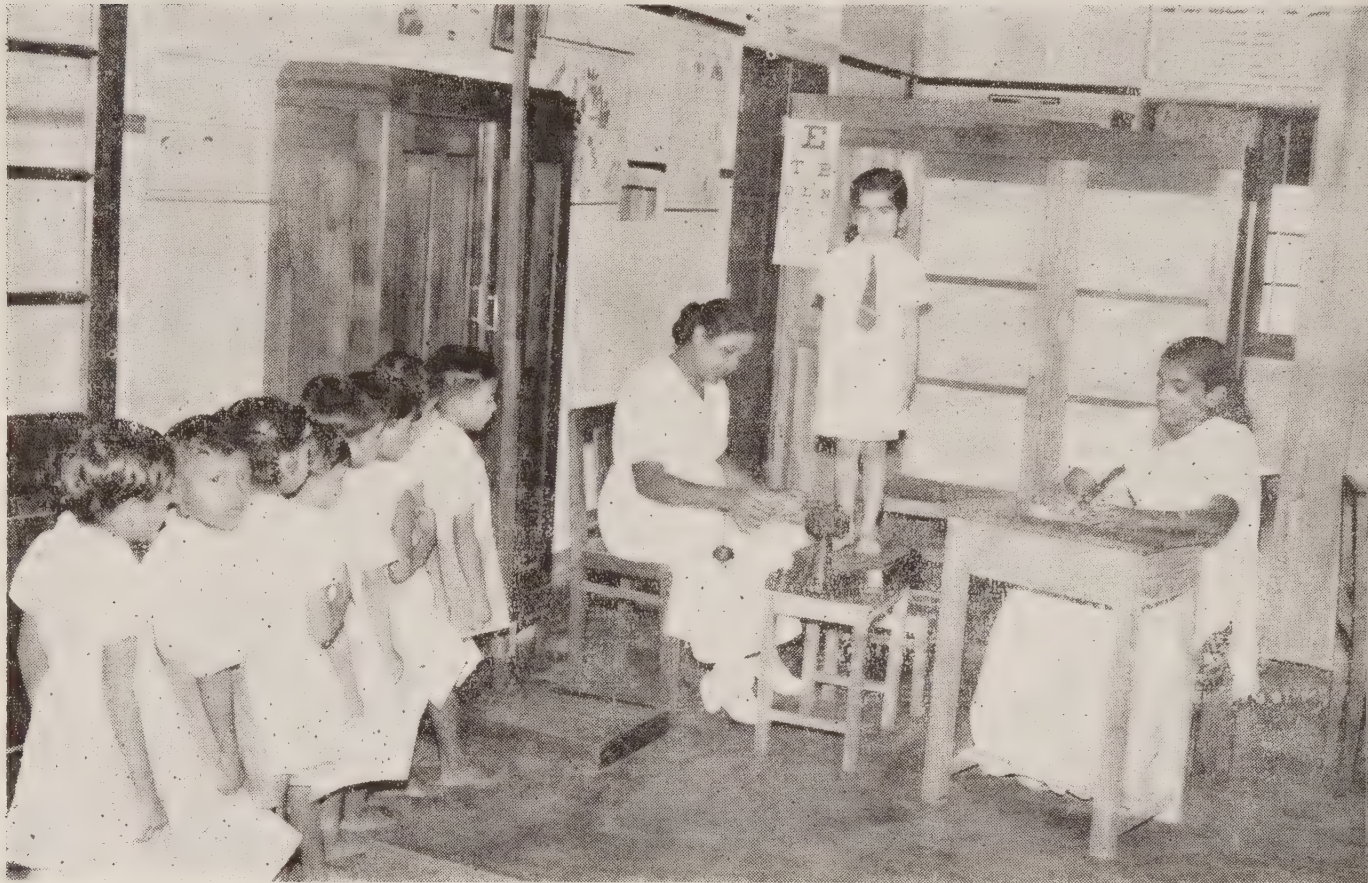
How the Maternal and Child Health Service of the Department have been successful in the marked reduction of the Maternal and Infant Mortality rates of the Island from 1947–1957 can be seen from the following statement :—

Maternal and Infant Mortality Rates

<i>Year</i>	<i>Rate per 1,000 Live Births</i>			
	<i>Maternal</i>		<i>Infant</i>	
1947 10.6	..	101
1948 8.3	..	92
1949 6.5	..	87
1950 5.6	..	82
1951 5.8	..	82
1952 5.8	..	78
1953 4.9	..	71
1954 4.6	..	72
1955 4.1	..	71
1956 3.8	..	67
1957 3.7	..	68

Care of the School Child

The School Medical Service has been designed as part of the Public Health Service of the country, and is now available for all children and adolescents in schools of all classes.



A SCHOOL CLINIC IN OPERATION

A School Medical Officer was first appointed in 1919 to visit the schools in the Island and to examine the children. His headquarters were in Colombo. Later on, a Lady Medical Officer was appointed for Colombo in 1921, and the Northern, Central and Southern Divisions each had such an Officer by 1927. The first School Health Nurse was appointed for Colombo in 1920, the second in 1925 for Jaffna, the third and the fourth for Kandy and Galle in 1927. It was only after the inauguration of the Malaria Control and Health Scheme in 1937 that a more comprehensive scheme of school health work was drawn up and put into practice.

As indicating the progress made during the 10 years under review it may be mentioned that while the number of school children examined in 1947 was 89,910 it had increased to 169,404 in 1957.

The School Health Work carried out by the Department consists of the following activities :

- (a) School Sanitation.
- (b) Medical Inspection.
- (c) Control of communicable diseases.
- (d) Correction of defects.
- (e) Health Education.

Periodical Medical Inspections that have been carried out during the past have had the following advantages :

- (1) They have been the only way to secure a statistical survey of the school population, revealing trends of health or ill-health, which would otherwise escape notice.
- (2) They give the Medical Officer an opportunity of detecting early defects of incomplete recovery from previous illness.
- (3) They bring the child, the parent, the teacher, the Medical Officer and the Nurse into close contact to consider the health of the child.

According to the Scheme now in operation Medical Inspection of School children is carried out three times during the child's school career, viz., in the lower kindergarten, the fourth and the seventh standards. No attempt has been made to provide a service for all the schools in the Island. The building up of a sound scheme in one area in limited circles has been the chief aim so that the service could be satisfactorily extended when the personnel would be forthcoming.

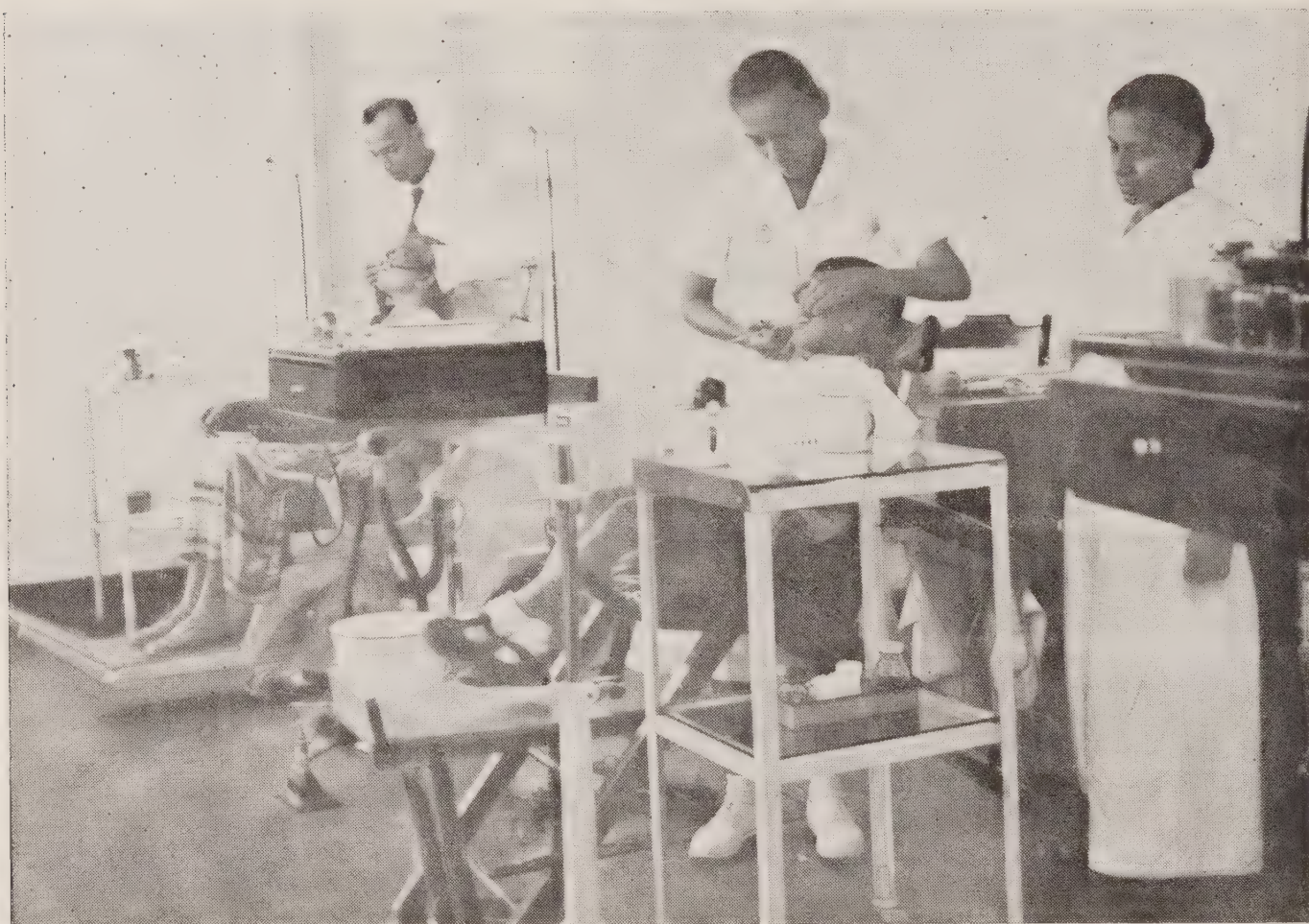
Ten Years Progress

The progress of school health work during the ten-year period from 1947-1957 is shown from the following figures :

		1947	1957
No. of Schools taken up for Medical Inspection	.. ..	1,222	3,817
No. of Scholars medically examined	.. ..	89,910	169,404
No. of Scholars defective	.. ..	51,088	120,534
No. of defects found	.. ..	110,560	402,387
No. of defects treated	.. ..	56,561	161,052

PREVENTIVE DENTAL CARE

It is a recognised fact that dental caries or decay of the teeth is the most prevalent of the many diseases that afflict civilised man. The problem, as revealed during the medical inspections of school children is a serious one but its exact position is still not known.



A SCHOOL DENTAL CLINIC IN COLOMBO

In 1950 it was decided to establish a Preventive Dental Service based on the New Zealand pattern. The New Zealand Government has given substantial assistance under the Colombo Plan not only in establishing the service but also in the training of Dental Nurses.

The Chief function of the School Dental Service is to improve the standard of the Dental health of school children from $2\frac{1}{2}$ to 13 years of age by affording them regular and systematic treatment at 6 monthly intervals and also to instruct the school children and the general public in the principles of oral hygiene.

Health Education

Health Education has always been a major responsibility of the Department of Health. This work was particularly emphasised with the establishment of the first Health Unit at Kalutara in 1926, and has further developed during the amalgamation of the curative and preventive departments, during the same period. A Superintendent of Health Education was appointed at that time to develop health education activities in schools, clinics, and with the community in general.



A HEALTH EDUCATOR CARRIES OUT A TRAINING PROGRAMME IN PUBLIC HEALTH FOR BUDDHIST PRIESTS

The Island wide Malaria Control Scheme started in 1937 served to develop health education work throughout Ceylon. The health education work in connection with the malaria control scheme led to the development of the All Ceylon Health Week.

In 1938 a Public Health Museum was organised in Colombo. From 1938 until 1952 publicity work was centralised at the Head Office, Colombo, with the Publicity Officer having responsibility for the preparation of materials such as pamphlets and posters and editing various departmental publications. The field staff of the department were expected to do health education as part of their usual duties.

In 1952 the Department re-organised and intensified its health education activities by assigning 10 specially equipped vans to the areas of the Superintendents of Health at Colombo, Kandy, Anuradhapura, Kurunegala, and Matara. These were in charge of Public Health Inspectors who had undergone training at the UNESCO Fundamental Education Project, Hingurak-goda, and they had to travel in their respective areas giving film shows and talks and setting up exhibitions.



HEALTH EDUCATOR CONDUCTS A TRAINING PROGRAMME FOR VOLUNTEER WORKERS

Specialised Health Campaigns in the fields of filariasis, Malaria, V. D., T. B., leprosy and cancer were each conducting their own health education activities throughout this period. Some of these campaigns had officers specially trained for this work and were using cinema vans and equipment, all producing their own health education materials.

RE-ORGANISATION OF HEALTH EDUCATION

Since the assignment of a W. H. O. Health Education Adviser in October, 1954, and the presentation of his report on Health Education in Ceylon, steps have been taken to re-organise, expand and intensify this work throughout the

Island. A Sub-Division of Health Education has been set up under the Division of Public Health Services and a Health Education Officer was appointed in charge of the Sub-Division. This Sub-Division is responsible for re-organising, developing and co-ordinating health education work at the Head Office, in the areas of the Superintendents of Health Services, and with the Specialised Campaigns. Through this division, co-ordination is being effected with the Department of Education and other Government Departments, voluntary organisations, the University of Ceylon and other local bodies. The Health Education Officer of the Sub-Division is responsible for supervising the field work and providing training in health education to all types of health and related personnel.



HEALTH EDUCATION MATERIALS BEING PRODUCED AT THE PRODUCTION UNIT

The former Public Health Museum has been re-organised into a Health Education Materials Unit for the preparation and production of all types of health education teaching aids. This Unit contains a Central Film Library

and is responsible for distributing films to the field staff, Specialised Health Campaigns, other Government Departments and Community Organisations. In addition to an Officer-in-Charge, other personnel at the Unit include an Artist, a Modeller, a photographer and a Cinema Technician. A considerable amount of supplies and equipment for this Unit is being provided by both W.H.O. and UNICEF.

A field staff for the Sub-Division of Health Education was selected and given an intensified two months training course at the Health Unit, Kalutara. One of these officers, now known as Health Educator (PHI), has been assigned to the office of each Superintendent of Health Services as well as to the Specialised Campaigns, for T. B., V. D. and malaria. These officers are now responsible for assisting the Superintendents of Health Services and all health staff in setting up health education programmes.

PLANS FOR THE FUTURE

With the establishment of a well organised Health Education Unit and Field Staff, this work become an essential and integral part of all health programmes. Health education is much more than simply imparting information in different ways. Instead it is a way of working with the public, a means of assisting our population to solve their community problems through helping themselves. For this reason health education must be the major responsibility of all health staff. The Health Education Unit and its field staff will be primarily concerned with assisting all personnel in carrying out this responsibility with great efficiency.

In order to conduct health education work more effectively, close co-operation is being maintained with all related Government Departments such as Education, Agriculture, Rural Development, Co-operative and with Voluntary Organisations. In this connection health education training to staffs of all of these Departments and Agencies has been intensified.

Laboratory Services

Men Behind the Scene : The Laboratory Services of Ceylon

THE true significance of a Laboratory Service is something which the layman should understand and appreciate because, however spectacular the advances made in medicine, surgery or public health may be, both the curative and preventive sides of modern medicine would be greatly impaired without a thoroughly efficient Laboratory Service.

In curative medicine, clinical pathology tests, varying from the simple blood counts and urine examinations to the highly complicated liver function and coronary thrombosis tests, play a very large part in assisting the diagnosis and treatment of a patient.



BLOOD TESTING FOR TYPHOID BEING CARRIED OUT AT THE M.R.I. IN COLOMBO

Bacteriology tests which detect and identify the specific germ causing a disease are also vital to curative work. These bacteriology tests carried out on individuals suffering from communicable diseases have moreover a wider significance in their public health aspect. Once such diseases have been diagnosed, immediate steps can be taken for the prevention and control of these diseases in the community as a whole.

Yet this is not all, for it is not enough for public health to locate the sources of infection, it is necessary to keep a check on the media through which infection spreads. Thus another and very important part of the work of a Laboratory Service is the examination of samples of water, milk and food, for evidence of contamination.

This brief resume of the work of the Laboratory Service will show how essential it is to a modern and efficient Health Service and explains why in the last ten years since Independence such vast strides had been made in the provision of better laboratory services. There is still of course a long way to go before our Laboratory Service could be made adequate to our needs ; but the first steps have been taken and great efforts are being made to extend to the whole island the facilities that hitherto have been available only in Colombo.

THE BEGINNINGS

Early beginnings of laboratory work in Ceylon go back to the turn of the last century, when Mr. Charles de Soysa donated the building that came to be known as the DE SOYSA BACTERIOLOGICAL INSTITUTE. No work could have had a more inspiring beginning for, small though it may have been, the Institute had from the start a long line of most distinguished men associated with it—Sir Marcus Fernando, Dr. S. C. Paul, Sir Aldo Costellani and Dr. Lucius Nicholas, all men who made permanent and valuable contributions to medical knowledge in Ceylon and even abroad. With such a tradition of “generous philanthropy and academic distinction” the Institute grew and flourished until it outgrew not only its original home but also its original concept. Expansion into more spacious quarters and extension of its functions came in 1937 when the Institute moved into its present home on a site in Baseline Road next to the old Institute.

A BIG CHANGE

The next big change came nearly a decade later when the Bacteriological Institute was converted into a MEDICAL RESEARCH INSTITUTE. A ten-year programme was drawn up under which the Medical Research Institute was ultimately to consist of ten sections each carrying out specialised working its own field. It must be an unique achievement for Ceylon that for once the

goal set was accomplished ahead of schedule. The ten sections, all manned by specialist officers, came into existence one by one as planned but at much shorter intervals than originally envisaged and all ten were thus functioning actively long before the specified deadline of 1955.

The Medical Research Institute was until 1952 one of the only three institutions in Ceylon, all situated in Colombo, which provided adequate laboratory services for the public. The other two were the Pathology Laboratory of the General Hospital and the laboratory of the City Microbiologist of the Colombo Municipal Council. The Medical Research Institute dealt with both the curative and preventive aspects of the Laboratory Service, but chiefly with bacteriology. The Pathology Laboratory of the General Hospital inevitably confined itself to the clinical pathology necessary for the purpose of the hospital and the City Microbiologist to the public health aspect. The Pathology Laboratory of the General Hospital dates back to the early 1920s, while the Laboratory of the City Microbiologist came into existence about 35 years ago.

Up to 1948 there was practically no laboratory work of any kind in the provincial hospitals apart from a few blood counts. In 1948, the year of Independence, a fresh approach began and provision for a much wider field of work made available in the provincial hospitals. Following the reorganization of the Health Department a co-ordinated plan for the expansion of the Laboratory Services was set down and during the last five years a good deal of this plan has been carried out.

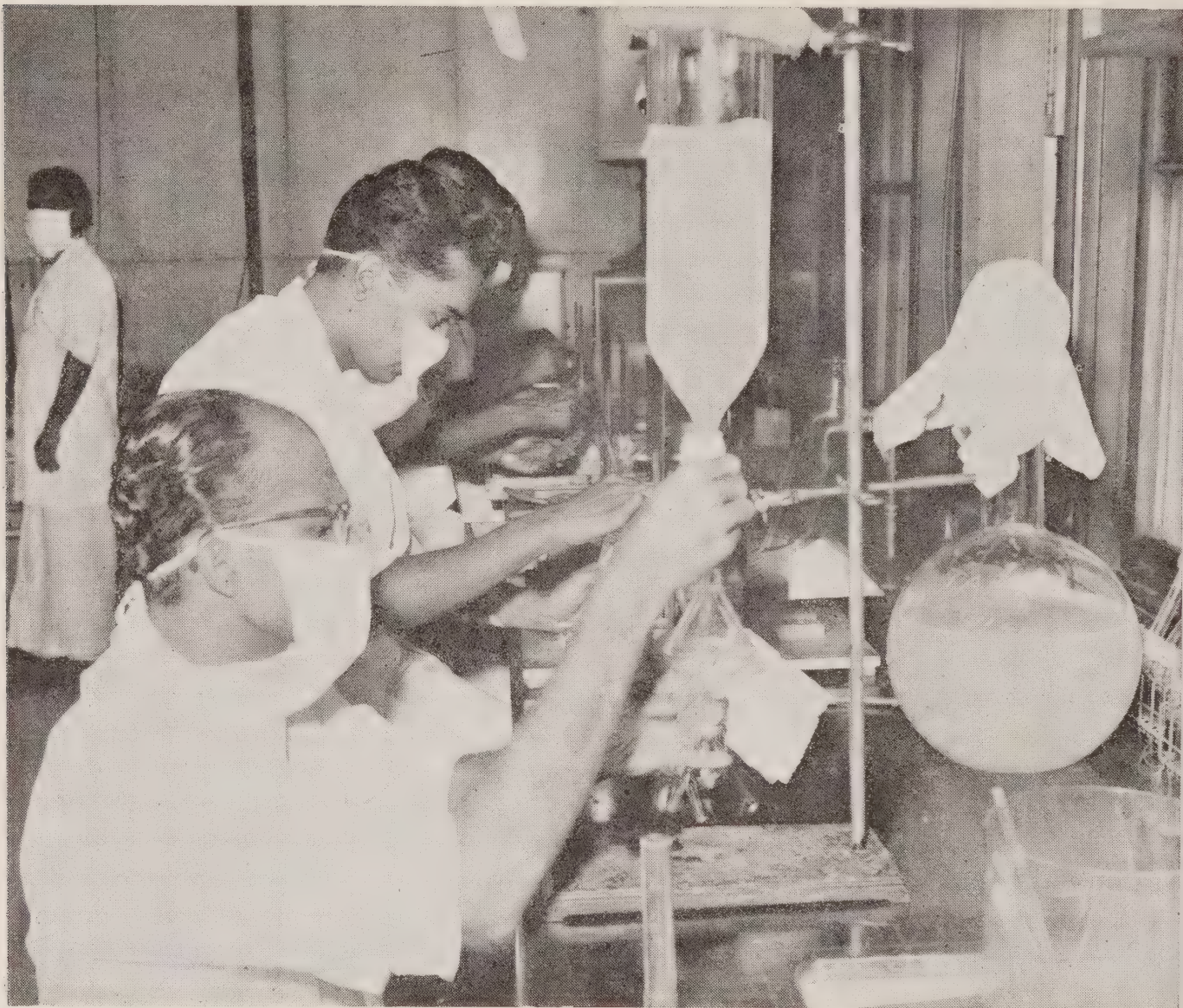
AN UNIFIED SERVICE

Today at the head of an unified Laboratory Service on a group system, is the Deputy Director of Health (Laboratory Services). He is also the Director of the Medical Research Institute which acts as a Central Reference Laboratory for the whole Island.

Each PROVINCIAL HOSPITAL in nine out of the fifteen Health Divisions into which the island has been divided, is to have a fully equipped Pathology Laboratory under a qualified medical man with specialist qualifications in Pathology. These laboratories will make available to the public the facilities which have so far been available only in Colombo. Today of the nine provincial hospitals, four, in Kandy, Galle, Jaffna, Kurunegala and Ratnapura,

have already been provided with pathologists and pathology laboratories and the rest will follow. They will act as central laboratories for the whole of their division.

The DISTRICT HOSPITAL, grouped round the Provincial Hospitals in each Health Division, are also to have laboratories but not on such a scale as those of the provincial hospitals. The District Hospital Laboratories will be in charge of trained laboratory technologists. For tests for which they are not equipped the District Hospital laboratories will make use of the Provincial Hospital laboratories and generally treat them as consultative laboratories. Of the hundred District Hospital laboratories planned fifty are already in existence.



PREPARATION OF VACCINE AT THE M.R.I.

In addition to the laboratories of the Provincial and District Hospitals the smaller PERIPHERAL UNITS of each division will also have facilities for conducting simple routine tests which will be carried out by the medical officer

in charge himself. He will have of course recourse to the laboratories of the nearest district hospital and if necessary to the laboratory of the provincial hospital. Thirty-three of the ninety peripheral units have already been equipped for this task.

IN THE COLOMBO GROUP

In Colombo today, in addition to the General Hospital, the De Soysa Maternity Home and the Lady Ridgeway Childrens' Hospital have a fully qualified Pathologist and fully equipped pathology laboratories. The other Hospitals of the Colombo group as well as in the Colombo District use the facilities of the Medical Research Institute for tests for which they are not equipped.

The Medical Faculty of the University has all its own facilities.

Apart from the services so far described further laboratory services are provided by the laboratories of the special campaigns, such as the Venereal Diseases Campaign, the Tuberculosis Campaign, the Anti-Malaria Campaign and the Filariasis Campaign.

Thus a well knit co-ordinated group system of laboratories for the whole island is already in operation and may be expected to work in its entirety in another five years. Ultimately it is hoped that it will provide fully, both aspects of the work of a laboratory service ; but for the present the public health aspect continues to be the responsibility of the Medical Research Institute for the whole island outside Colombo, where that work is undertaken by the City Microbiologist. This is of course not very satisfactory and an attempt has been made already in some of the provincial hospitals to undertake the examination of samples of water, milk and food.

THE MEDICAL RESEARCH INSTITUTE

The co-ordinating factor in the whole laboratory set-up in Ceylon is the Medical Research Institute and the Deputy Director of Health (Laboratory Services), is therefore also Director of the Medical Research Institute. The Medical Research Institute is the Central Reference Laboratory for the whole island and all the provincial hospital laboratories are expected to make full use of its facilities. As a matter of fact the Medical Research Institute still does most of the bacteriological tests for the whole island and it will be some time before the provincial hospitals undertake all this work. The Medical Research Institute is also solely responsible for the public health laboratory service outside Colombo and this involves dealing with specimens from the whole island. Finally, the Medical Research Institute, as its name implies, is a Research Centre.

TEN SECTIONS

The work of the Institute is divided into ten sections. First there is the **BACTERIOLOGY SECTION**, detecting Bacteria whether in an individual or in water, milk or food endangering the health of the people as a whole. It also prepares anti-typhoid, anti-cholera and Anti Rabies vaccines and auto-vaccines.



PROVINCIAL LABORATORY AT KURUNEGALA

The allied **SEROLOGY SECTION** diagnoses diseases like typhoid, and venereal diseases by means of blood tests. The diagnosis of virus diseases like smallpox rabies and Influenza and the preparation of vaccine for inoculation against them is the work of the **VIRUS SECTION**. In the recent smallpox epidemic this section worked night and day to provide the necessary vaccine to meet the needs of the whole country and one need not look further for proof of the efficiency of the laboratory service when put to the test.

Diseases caused by parasites such as amoeba and worms is the province of the PARASITOLOGY SECTION. The MYCOLOGY SECTION deals with fungi causing diseases in man and is one of the last of the ten sections to be set up.

Insect carriers of disease are the special study of the ENTOMOLOGY SECTION which is actively engaged in field and laboratory investigation. Insect-borne diseases are particularly troublesome in the Tropics and therefore need special study.

The PATHOLOGY SECTION uses standard laboratory methods for testing blood, urine, stools and other material as aids in diagnosis for some of the Colombo hospitals and for private practitioners on the payment of a fee. Experimental pathology is becoming a feature of the work of this section.

The BIOCHEMISTRY SECTION undertakes the chemical analysis of the blood and other fluids as its routine work. It also acts in an advisory capacity to the Ministry of Food and Agriculture.

The investigation of the action of drugs suitable for treatment of patients is undertaken by the PHARMACOLOGY SECTION.

Finally there is the NUTRITION SECTION which carries out regular nutrition and dietary surveys in the field, investigates nutritional problems in the laboratory and educates public health personnel. This section also acts in an advisory capacity on nutrition matters providing a consultative service to the Health and other interested Ministries.

TRAINING CENTRE

In addition to all this the Medical Research Institute trains all the laboratory technologists for the whole island. Until recently the Institute ran a scientific modelling section which prepared models of public health interest for demonstration and for the use of health centres.

There is also an animal section housing a large number of different animals used in the preparation of vaccine, in biological tests and in research. The photographic section deals with the publication needs of the different sections. Finally, there is the excellent library that the Institute maintains.

The pattern for the future development of the Laboratory Service in Ceylon has been set by the Health Act, of 1952. This pattern has to some extent been conditioned by the need for economy but within those limits it is possible still to envisage a service that will adequately fulfil the needs of the public. It is hoped that as the provincial laboratories develop and undertake more and more of both curative and preventive work the Medical Research Institute will increasingly be released for what after all, as its name implies, is its chief function, RESEARCH.

Specialised Campaigns

- (a) **A Spectacular Achievement – Malaria No Longer a Menace.**
- (b) **Dark Clouds of Tuberculosis No More**
- (c) **Another Mosquito-Borne Disease – Filariasis.**
- (d) **Venereal Diseases – A Community Problem.**
- (e) **No Longer to be Dreaded – Leprosy.**
- (f) **Ceylon's First Line of Defence – The Quarantine Services.**

A Spectacular Achievement—Malaria no longer a Menace

“ Although Ceylon is a small country which is primarily agricultural, nearly two-thirds of the Island have been uncultivable chiefly owing to the dreaded disease, malaria. With the removal of malaria to-day, a serious menace to the country, it will be possible to open up these vast tracts of land considerably to improve the living conditions of the people, the majority of whom hitherto have been living in poverty and misery. I have no doubt that the achievement of Ceylon will prove a source of encouragement not only to the W. H. O. generally, but to the countries of South-East Asia in particular where similar problems still exist ”.

—From a speech of the Hon'ble Mr. S. W. R. D. Bandaranaike made in 1950 when he was Minister of Health and Local Government.

The need for effective malaria control in this country was made manifest by the “ Great Epidemic of Malaria ” that occurred in 1935 when 4 million case visits were paid to hospitals and dispensaries and 60,000 deaths from Malaria occurred during the six months of the epidemic in the affected area.

From that time onwards, Malaria control played an important part in the Public Health Programme of this country, but up to 1946 however no appreciable reduction in the intensity of this disease could be made. The poor

results that attended these early attempts to control the disease were not, the consequence of a lack of intensity of effort, but only proof of the total inadequacy of the weapons then available in the fight against malaria.

NEW METHODS OF MALARIA CONTROL

In the latter years of the World War II, D. D. T. a substance that could kill insects such as lice, fleas, mosquitoes and bed bugs, even after months, when once sprayed on their resting places, was discovered.

After the war this substance became available for civilian use in 1945 and Ceylon carried out early trials with it to control malaria in Anuradhapura, Kurunegala and Kandy.

PLANNING FOR MALARIA CONTROL ON NATION-WIDE BASIS

On the basis of the results of these early trials a scheme for a nation-wide plan for malaria control in the Island was organised.

The year 1947 was a notable year for this country. During this year, Ceylon attained independence, and the new weapon which was tried out only at selected places earlier, was used for the control of malaria on a nation-wide scale.

In 1947 all the houses in all parts in the Island subject to epidemic or endemic malaria were sprayed with D. D. T.

RESULTS OF RESIDUAL SPRAYING

(A) *Spleen Rates* : The spleen rate indicates the intensity of malaria in a place. These surveys have been carried out annually in this country and revealed the progress and success attending the efforts to control malaria.

The overall spleen rate for the whole Island was 11·6 in 1946. In 1955 it had been reduced to 0·2. The spleen rates for Vavuniya, Hambantota, Puttalam and Anuradhapura, which were highly malarial areas, in 1946 were 65·3, 52·2 and 38·5 respectively. In 1955 they had been reduced to 0·0, 1·4, 0·0 and 0·4 respectively.

VITAL STATISTICS

The general improvement of the health of the population at large is indicated by the general decline in death rates occurring concurrently with the control of malaria. It will be seen from the table given below that the crude death rate

of 14·3 in 1947 declined to 10·1 in 1957 and the maternal mortality rate from 10·6 in 1947 to 3·7 in 1957 and the infant mortality rate from 101 in 1947 to 68 in 1957.

<i>Year</i>		<i>Crude death Rate</i>		<i>Maternal Mortality Rate</i>		<i>Infant death Rate</i>
1947	..	14·3	..	10·6	..	101
1948	..	13·2	..	8·3	..	92
1956	..	9·8	..	3·8	..	67
1957	..	10·1	..	3·7	..	68

These are achievements towards which the control of malaria has contributed materially.



RESIDUAL SPRAYING BEING CARRIED OUT IN A RURAL HOME

There was a spectacular reduction in malaria after one year's spraying, when the number of malaria deaths declined from 12,587 in 1956 to 4,562 in 1947. This rapid decline has continued and in 1957 only ·8 deaths were reported from malaria.

MALARIA MORBIDITY FOR THE ISLAND

The reduction of Malaria morbidity during 1945-57, inspite of the annual increase of the population are equally spectacular and are well demonstrated by the following figures :—

<i>Year</i>	<i>Estimated Population</i>	<i>Number of Malaria Cases</i>	<i>Morbidity Rate per 1,000</i>
1947	.. 7,037,000	.. 1,459,880	.. 207
1948	.. 7,244,000	.. 775,276	.. 107
1949	.. 7,455,000	.. 727,769	.. 98
1950	.. 7,455,000	.. 610,781	.. 80
1951	.. 7,876,000	.. 448,100	.. 57
1952	.. 8,074,000	.. 269,024	.. 53
1953	.. 8,290,000	.. 91,990	.. 11
1954	.. 8,520,000	.. 29,650	.. 3.5
1955	.. 8,723,000	.. 7,317	.. 0.84
1956	.. 8,929,000	.. 3,100	.. 0.35
1957	.. 9,165,000	.. 6,999	.. 0.76

That distinguished malariologist, Professor D. Mc Donald of the London School of Hygiene and Tropical Medicine, referring to the success of the malaria control work in Ceylon said :

“ It amazes me that the people of Ceylon do not realise the magnitude of what they have achieved in bringing malaria under control. Ceylon's malaria control is the best in the East. Any country interested in malaria control should study Ceylon's progress in this direction ”.

Economic Benefits of Malaria Control

Many economic problems that the country had to face during the 1930's have been solved by the control of Malaria. Many irrigation and Agricultural, Land Development and Food Production Schemes which had been tried out prior to 1946 had proved failures. Their progress was kept in check by the ravages of Malaria. To-day the position has been reversed. Hundreds of thousands of people from the more populated parts of the country are now settling down in the Dry Zone which was once termed the grave-yard of the colonist.

RICE PRODUCTION IS TREBLED

During the 9-year period 1939 to 1947 only 147,000 acres had been developed at an average of 16,308 acres per year. During the 9 years from 1948 to 1956, after the control of malaria, 567,286 acres have been developed at an average of 63,032 acres per year.

The numerous development schemes that brighten the landscape in the Dry Zone today, the happy families settled there, the healthy workers and the vast extents of smiling paddy fields bear ample testimony to the rewards that are being reaped by the first country in the East to organise a nation-wide programme of malaria control.

Future Programme

Now that malaria has been successfully controlled, a Five-Year programme has been prepared for its eradication and approved by the Government. Financial assistance is provided in the form of equipment, motor vehicles and drugs by the I. C. A. through the U. S. O. M., Ceylon. The implementation of the programme started in October, 1958 :



HANDING OVER OF U.S.O.M. JEEPS TO THE HON. THE PRIME MINISTER OF CEYLON IN FRONT OF THE HOUSE OF REPRESENTATIVES

According to the Five-Year Programme of Eradication it has been proposed :

- (i) to resume spraying again in the whole of the Dry Zone where malaria was endemic and continue until transmission has been completely interrupted and

- (ii) to make an intensive effort to detect all pockets of infection and treat and cure all malaria cases so that when the spraying is discontinued there will be no infected mosquitoes to transmit malaria.

Dark Clouds of Tuberculosis No More

MODERN METHODS OF TUBERCULOSIS CONTROL

“THE dark clouds that hung so ominously over the unfortunate victims of Tuberculosis in this country are now fast dispersing as a modern and up-to-date chain of Chest Clinics with improved method of diagnosis, hospitalization facilities, efficient drugs coupled with more intensive Public Health work for detection and supervision of contacts, are bringing about a position from which we can now look hopefully to the effective control of the disease, if only those others equally important adjuncts of better sanitation, the clearing of slum areas, the provisions of better housing, better and cheaper essential foods for better nutrition could be made to play their all important part in the Campaign's general plan”.



HAWK MEMORIAL WARD FOR T. B. PATIENTS

Dr. D. L. J. Kahawita, Director of Health Services, in his Administration Report for 1955.

Malaria having been successfully controlled Tuberculosis has now become Ceylon's most important Public Health problem. There had been no definite information regarding the extent of tuberculosis in Ceylon until a random

sample survey was carried out by a W. H. O. Team of Experts in 1956. The information available up to that time was from cases diagnosed at Clinics and in Hospitals and was inconclusive and unreliable. Estimates based on this type of information did not present a clear picture of the problem.

The National Tuberculosis Survey, as it was called, was limited to the population aged 10 and above. On the result of this survey the total number of estimated cases for all Ceylon was 63,000, 36,400 being males and 26,600 females.

Dr. James Deeny, the leader of the Team, in his Report on the National Tuberculosis Survey in Ceylon says "The survey experience was that in the cities and towns, particularly in Colombo the tuberculosis service was efficient and provided facilities and effected diagnosis quite as well or better than elsewhere. The number of cases found in Colombo which had not been diagnosed already was small. In rural areas the opposite was the case and the need for a greatly improved rural diagnostic and preventive service is clear.

DEVELOPMENT OF THE TUBERCULOSIS CAMPAIGN 1947-57

The activities of the Anti-Tuberculosis Campaign were organised on a mass scale in 1947. The Government took over the full responsibility, and all expenditure, for the control of tuberculosis in the Island.

The Government being fully aware of the heavy responsibility of its undertaking sought advice from International Organisations for the solution of this rather complicated problem. Assistance was forthcoming from every quarter ; and, with the help of the Joint enterprise and later on, of W. H. O. and UNICEF, a B. C. G. Campaign was organised in 1948. With repeated assistance from both organisations this campaign was continued and, after some time, re-organised and intensified in May, 1954.

In 1949, repeated consultations were held with representatives of the W. H. O. and the International Tuberculosis Campaign with a view to place the Tuberculosis Campaign in Ceylon on a sound footing with technical and other aid.

The formation of the Ceylon National Association for the Prevention of Tuberculosis in 1949 gave added encouragement and public support for the tremendous task that the Government undertook to shoulder in this field.

By 1950 it was clearly seen that there was generous public support forthcoming even locally ; Mr. A. R. M. Thassim, Mayor of Galle, donated Rs. 100,000 for the construction of a Chest Clinic at Galle, while the Ceylon National Association for the Prevention of Tuberculosis (C. N. A. P. T.) within an year of its formation undertook the construction of a Children's Ward at the Chest Hospital, Welisara.

The late Dr. J. H. L. Cumpston, who was invited by the Government of Ceylon to report on the Medical and Public Health Organisations of Ceylon made valuable and far reaching recommendations for the re-organisation and expansion of the Tuberculosis Campaign.

A planned propaganda campaign was launched in 1951, and by this time, there was a marked increase in the number of patients who preferred hospital treatment.

In order to meet this urgent demand light construction wards were built on a supplementary estimate passed by the Parliament.

Another important landmark in the history of the Tuberculosis Campaign in Ceylon was the Report of Dr. Donald Barlow who was invited to make a survey of the tuberculosis situation in Ceylon. His Report on the "Thoracic Services of Ceylon with special reference to Pulmonary Tuberculosis" forced everyone concerned to act quickly to improve the situation.

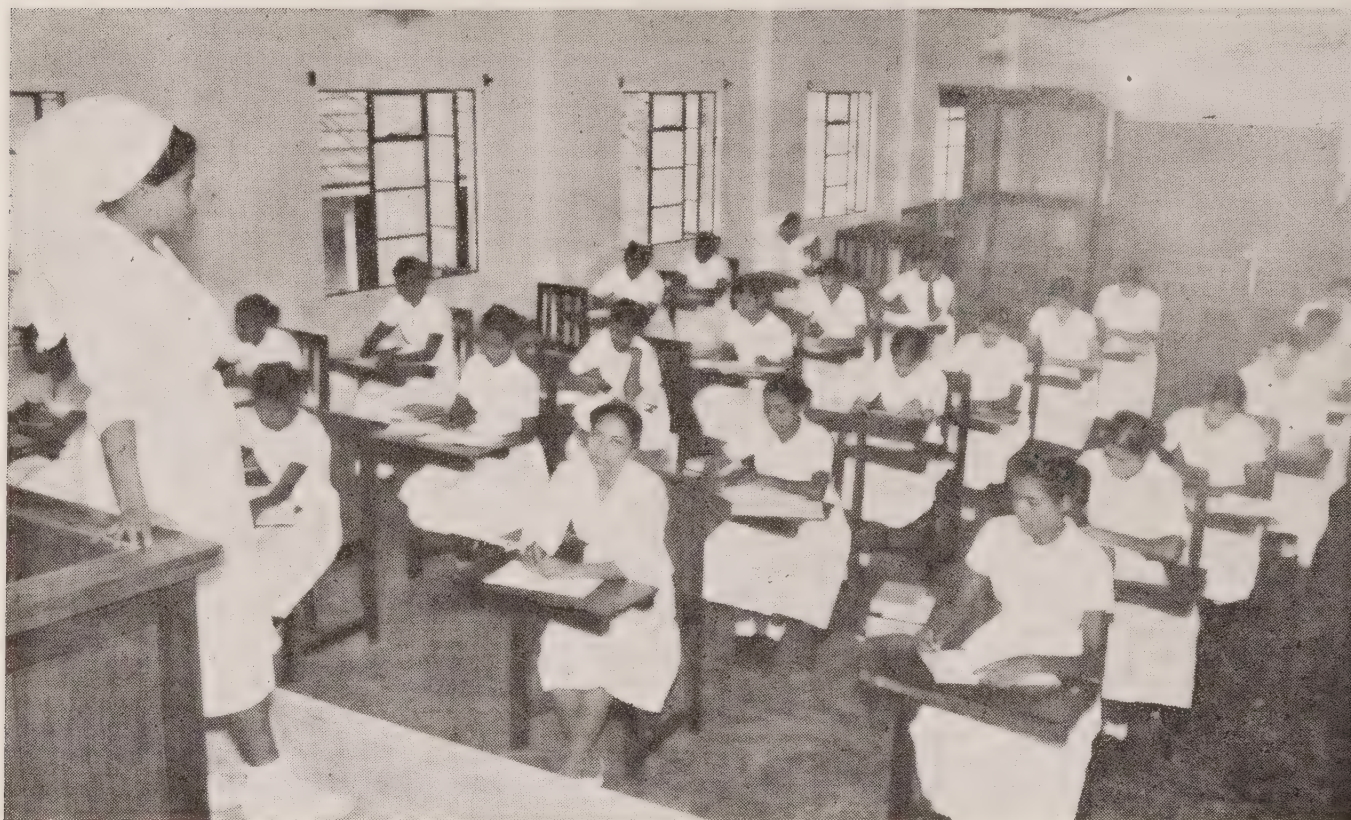
A request was made immediately to the W. H. O. for the services of an Advisor on Tuberculosis and this request was granted by the assignment of Dr. R. T. Neubauer as Tuberculosis Advisor to Government of Ceylon, in 1954.

Another important outcome of Dr. Barlow's Report was the gift from the Australian Government amounting to more than Rs. 3,000,000 for Anti-tuberculosis activities in Ceylon. A major portion of this money was utilized for the purpose of building up-to-date Chest Clinics equipped with modern facilities in Provincial capitals.

From 1954 onwards the programme of Tuberculosis Control received new impetus and the activities of the Campaign increased by leaps and bounds. The arrival of the W. H. O. Advisor and eight experts this year was partly responsible for this progress.

These developments may be summarised as follows :

- (a) The opening up of modern Chest Clinics at Provincial capitals ;
- (b) The establishment of a School for the Training of Tuberculosis Nurses ;
- (c) The equipment of an excellent laboratory with facilities for carrying out the most modern clinical and bacteriological tests for diagnosis ; and



A TRAINING CLASS FOR T. B. NURSES AT WELISARA

- (d) The purchase of a large quantity of equipment for effectively dealing with this disease by way of new X'Ray plants and screening plants deserve special mention as a measure of the progress made in and after 1954.
- (e) As no programme of control of tuberculosis is complete without a scheme for rehabilitation, a Rehabilitation Centre was organised at Talagolla.
- (d) The organisation of Central Register of all Tuberculosis cases in Ceylon to assist in the more efficient and effective control of the disease.

No Social Stigma

With the extension of diagnostic facilities more and more people have begun to turn up at the Chest Institutions when they discovered that tuberculosis is

not what it was considered to be some time back, and that the unfortunate stigma attached to this disease was only a myth.



LABORATORY TESTS BEING CARRIED OUT AT WELISARA

SOCIAL ASPECTS OF TUBERCULOSIS CONTROL

Rehabilitation

An important undertaking of the Tuberculosis Campaign is the rehabilitation of the recovered patients. It has been realised that all efforts made by the Campaign in the field of treatment and prevention of the disease would be of little avail unless proper measures are adopted for the rehabilitation of the recovered.

Therefore, a Rehabilitation Centre has been established at Talagolla as an experimental station. Seventy patients are undergoing training at the Centre in carpentry, weaving, sewing, tailoring, and shorthand and type-writing.

The patients of this Centre have been under close and careful medical supervision but it was considered useful that the actual nursing aspect should receive less emphasis in order to build up greater confidence in the patients as to their physical capabilities.

A general programme of recreational activities in the evenings, designed to develop the sense of social behaviour and latent qualities of leadership and public-spiritedness has been followed with a certain amount of success.

Arrangements have been made for the Health Educator of the Tuberculosis Campaign to visit the Centre and to give lectures and film shows for the benefit of the patients.

Two graduate teachers are voluntarily instructing the patients who are preparing for the S. S. C. and G. C. E. examinations. Four patients sat for the S. S. C. examination and eight others took up the G. C. E. examination in shorthand and type-writing. Two patients took up the competitive examination for recruitment of Sinhala Stenographers.

The question of rehabilitation of the tailoring trainees is under consideration in consultation with the C. N. A. P. T. Council, which is sponsoring a Rehabilitation Project at Kadawata.

Financial Assistance

Financial assistance is given on a "Means" test to tuberculosis patients. This scheme has now reached the fifth year of operation and assistance is given through the Department of Social Services to incapacitated tuberculosis patients and their dependants. The number of patients who received financial assistance at the end of December, 1957, was 12,262. This cost the Government Rs. 5,940,559 in 1956-57. It is expected that the number of recipients of Tuberculosis Allowances will increase for some years.

Another Mosquito-Borne Disease—Filariasis

EARLY DETECTION MEANS EARLY CURE

Filariasis, generally known as Elephantiasis because of the ugly deformities associated with it, is caused by a small thread like worm. Deformities occur as a result of lymphatic obstruction, caused by the worms. The disease is transmitted from one person to another by certain species of mosquitoes.

As a result of a survey carried out between April, 1937 and March, 1939, filariasis was detected in certain well defined areas of Ceylon.

Further, these surveys revealed that the disease was prevalent in certain pockets in the Southern, North Western, Eastern, Western and North-Central Provinces. The predominant species responsible for the disease was *W. Malayi*. The bancroftian type was found mainly in Galle and Matara.

It was also found that the malayi type of filariasis was associated with the prevalence of the pistia plant and that the disease was spread by mosquitoes belonging to the subgenus *mansonioides*. In the case of the bancroftian type, the disease was spread by mosquitoes belonging to the species *Culex fatigans*, found commonly in water collections in and around human habitations.

A programme of work for the destruction of pistia plants (breeding centres of mansonioides) was got up ; unfortunately this programme could not be implemented due to financial stringency resulting from the outbreak of World War II.

About an year or two after the termination of the war, many cases of lymphangitis were brought to the notice of the Department of Health and this resulted in the inauguration of a separate Campaign for the control of filariasis. The Anti-Filariasis Campaign was started on 24th October, 1947, and was placed under the administrative control of the Deputy Director of Public Health Services of the Department of Health.



A CASE OF ELEPHANTIASIS

Surveys carried out soon after the inauguration of the Campaign against filariasis revealed foci of infection in the Western Coastal belt of Ceylon, especially in Colombo, Dehiwala, Kotte, Kolonnawa, Peliyagoda, Moratuwa, Beruwala, Induruwa, Weragoda, Galle, Weligama, Matara, Walasmulla,

Weeraketiya, Hettipola, Bingiriya and Toppur. In the urban areas the type of infection was by *W. bancrofti* and in the rural areas it was principally confined to *W. malayi*.

An analysis of nearly 2,000 clinical cases detected in 1943 revealed the following clinical manifestations :

Elephantiasis of legs (53.5%) Lymphangitis of legs (42.5%) Hydrocoele (2.1%) Epididymitis (0.7%) Adenitis (0.6%) Lymphangitis of the arms (0.2%) Orchitis (0.1%) Affections of the mammary gland and chyluria (0.05%) each.

CONTROL

Based on the findings of the survey a scheme of control measures was put into operation.

The scheme consisted of :

- (a) Education of public by means of field talks, lantern and cinema shows.
- (b) Case finding by means of night blood surveys.
- (c) Treatment of microfilaria cases with Hetrazan.



A PICTURE SHOWING THE USE OF LARVICIDES

- (d) Reduction of the density of mosquitoes by the use of insecticides and larvicides.
- (e) Destruction of Pistia plants by the use of weedicides.
- and
- (f) Establishment of clinics for treatment of clinical cases at Dehiwala, Kotte, Kolonnawa, Peliyagoda, Ratmalana, Moratuwa, Panadura, Kalutara, Beruwala, Ambalangoda, Galle, Unawatuna, Weligama, Matara, Induruwa, Walasmulla, Hettipola and Toppur.

W. H. O. SPECIALIST

At the request of the Department of Health the W. H. O. was kind enough to send Dr. M. O. T. Iyengar, to report on the existing Filariasis control measures in the Island and to suggest measures for improvement. Dr. Iyengar was in this Island from June 6th to August 1st, 1949. In 1950 the operational proceedings of the Filariasis control scheme were brought into line with Dr. Iyengar's recommendations.

Dr. Iyengar visited this country a second time during the early part of 1950 with a view to carry out further experiments with larvicide which can be applied to all types of breeding places.

RURAL TYPE FILARIASIS

The control measures were intensified as from 1949 and the results obtained are shown below in the tabulation of microfilaria rates.

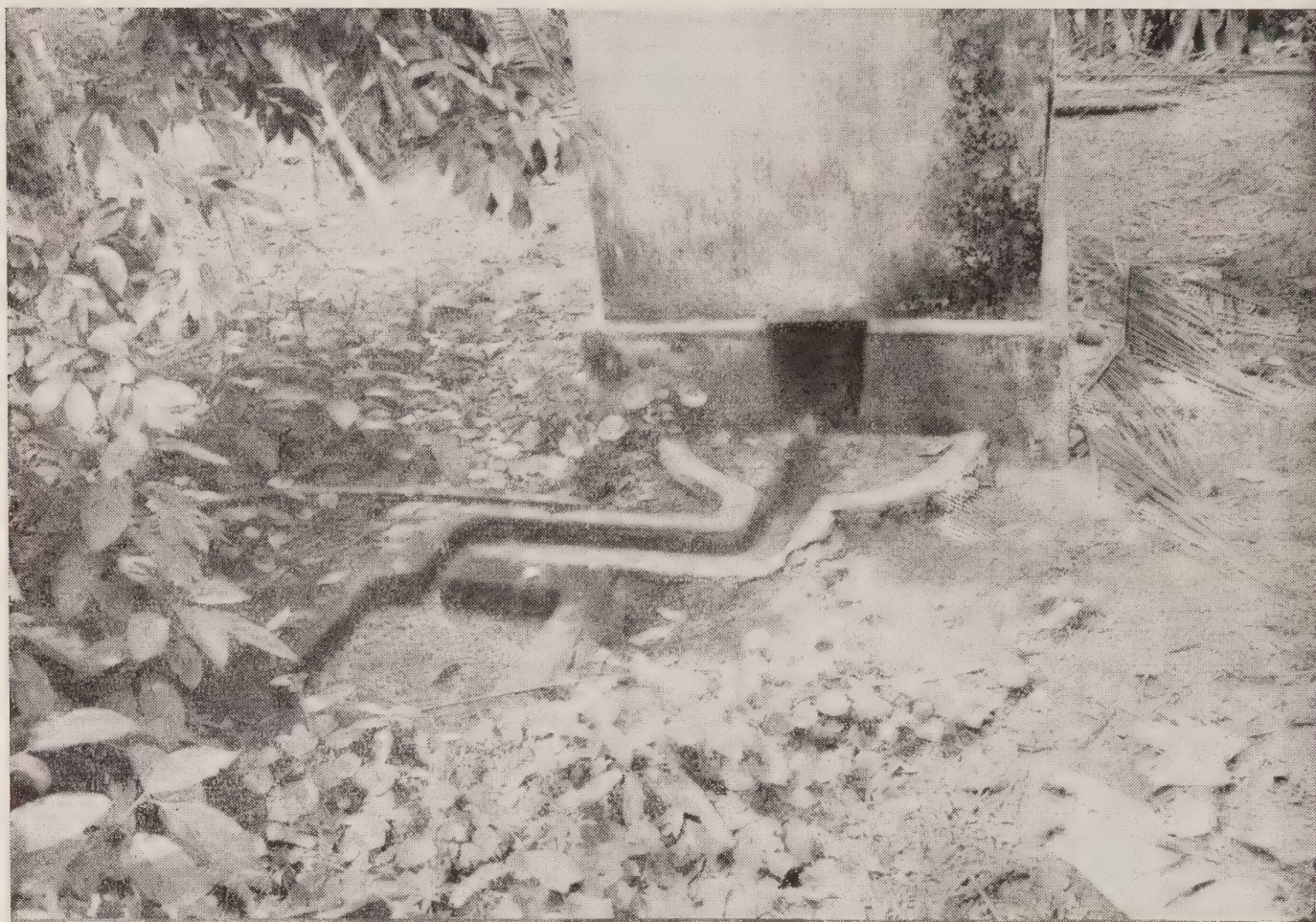
<i>Health Area</i>		1949		1951		1953		1955		1957		1958
Walasmulla	..	10.6	..	2.5	..	5.2	..	.4	..	.08	..	—
Weeraketiya	..	1.3	..	3.6	..	0.9	..	—	..	—	..	—
Induruwa	..	3.7	..	2.1	..	1.0	..	.4	..	.13	..	—
Bingiriya	..	1.3	..	3.8	..	0.5	..	—	..	—	..	—
Wariyapola	..	7.0	..	3.4	..	0.5	..	—	..	—	..	—
Toppur	..	18.0	..	5.8	..	1.1	..	—	..	—	..	—
Unawatuna	..	—	..	—	..	—	..	2.6	..	—	..	.83

The Superintendent Filariasis Campaign reported in 1954 as follows :

“ The two types of Filariasis, Urban caused by *Wuchereria bancrofti* and Rural by *Wuchereria malayi*, continue to be endemic, but it is encouraging to report that the rural type is definitely being reduced. This is attributed to the successful control of pistia infestations by the spraying of the weedicide Phenexylene .30 ”.

URBAN TYPE FILARIASIS

The control of *Culex fatigans* in urban areas has become rather a difficult task. The multiplicity of breeding places in the immediate vicinity of the house, the peculiar breeding habits and resting habits of the mosquito have contributed



PLACES LIKE THIS WERE TREATED WITH LARVICIDES ON WEEKLY CYCLES

greatly towards making the task more and more difficult. It is not widely known that a total of about 14,000 catchpits and about 50,000 other types of breeding places are treated with larvicide on a weekly cycle.

With a view to reducing the number of catchpits a scheme of converting catchpits to seal-pits was started during 1957. Government aid was given to the householder at the rate of Rs. 60 per catchpit conversion. The scheme was put into operation in June, 1957 and a total of 2,417 catchpits have been converted during the period June, 1957 to June, 1959.

In addition to the breeding places mentioned above a variety of other man-made breeding places such as burrow pits, quarry pits, abandoned wells, obstructions in drains and gutters, empty containers, storage tanks and vessels for water &c. are responsible for large scale breeding of *Culex fatigans*.

Elimination of these breeding places cannot be achieved without the active co-operation of the people and local authorities.



THESE CATCH-PITS HAVE BEEN TURNED INTO SEAL PITS

Despite the many difficulties enumerated it has been possible to make some impression on the disease as the subjoined table of microfilaria rates will indicate.

Health Area	1949	1951	1953	1955	1957	1958
Dehiwala	8.7	7.5	5.1	2.3	2.3	2.5
Kotte	4.2	5.2	1.5	1.2	1.3	.35
Kolonnawa	—	—	5.4	1.9	3.1	3.0
Ja-Ela	8.0	9.8	3.6	3.2	3.7	2.5
Moratuwa	2.7	1.7	1.4	0.3	.10	.37
Panadura	—	—	5.4	4.7	1.6	1.8
Beruwala	12.0	—	—	1.3	3.9	1.8
Kalutara	4.1	3.3	3.4	2.6	0.73	.41
Weligama	3.8	12.4	2.4	2.1	2.7	2.0
Matara	9.7	7.8	5.9	2.4	2.5	2.3
Ambalangoda	2.2	7.6	2.1	0.5	1.06	1.7

The installation of proper sewerage and water schemes in the towns immediately to the North and South of Colombo where Filariasis is endemic



THESE ARE THE BREEDING PLACES OF MOSQUITOES

will go a long way in solving this problem. The installation of water schemes in these areas is already under way and the authorities concerned should make all efforts to see that sewerage schemes are installed very early in the following towns :

Dehiwala, Mt. Lavinia and Ratmalana,
 Moratuwa,
 Kotte,
 Kolonnawa,
 Peliyagoda,
 Wattala,
 Negombo,
 Panadura,
 Kalutara,
 Beruwala,
 Ambalangoda,
 Galle,
 Weligama, and
 Matara.

Venereal Diseases—a Community Problem

A Social stigma still exists among the community regarding V. D. and the V. D. patient. Although better facilities are made available at Government full time clinics, many patients still take treatment from unqualified practitioners or rely on home remedies and self treatment. This is due to the fear of being found out. With intensive health education procedure ceaselessly continued for many years it will be possible to remove this social stigma thereby persuading every person who suspects exposure to infection to attend the clinic for necessary advice, treatment and follow-up.

Venereal Diseases control work was intensified during the period of the Second World War, when large numbers of foreign troops were stationed in the Island.

With the end of the war this work slackened for a short period. However it received a fresh impetus in 1949 with the arrival of Professor George Leiby, V. D. Consultant to the W. H. O. whose services were made available in November, 1949.

Dr. Leiby pointed out that the problem of the control of Venereal Diseases had to be approached from the community point of view and that psychological aspect of the problem had to be constantly kept in mind and methods devised by which satisfactory follow-up work could be carried out.

He also pointed out that the approach to the V. D. problem had been simplified very considerably by the recent improved techniques in regard to both diagnosis and treatment. He recommended to the W. H. O. that a V. D. Team of Experts should be sent to organise V. D. work in Ceylon.

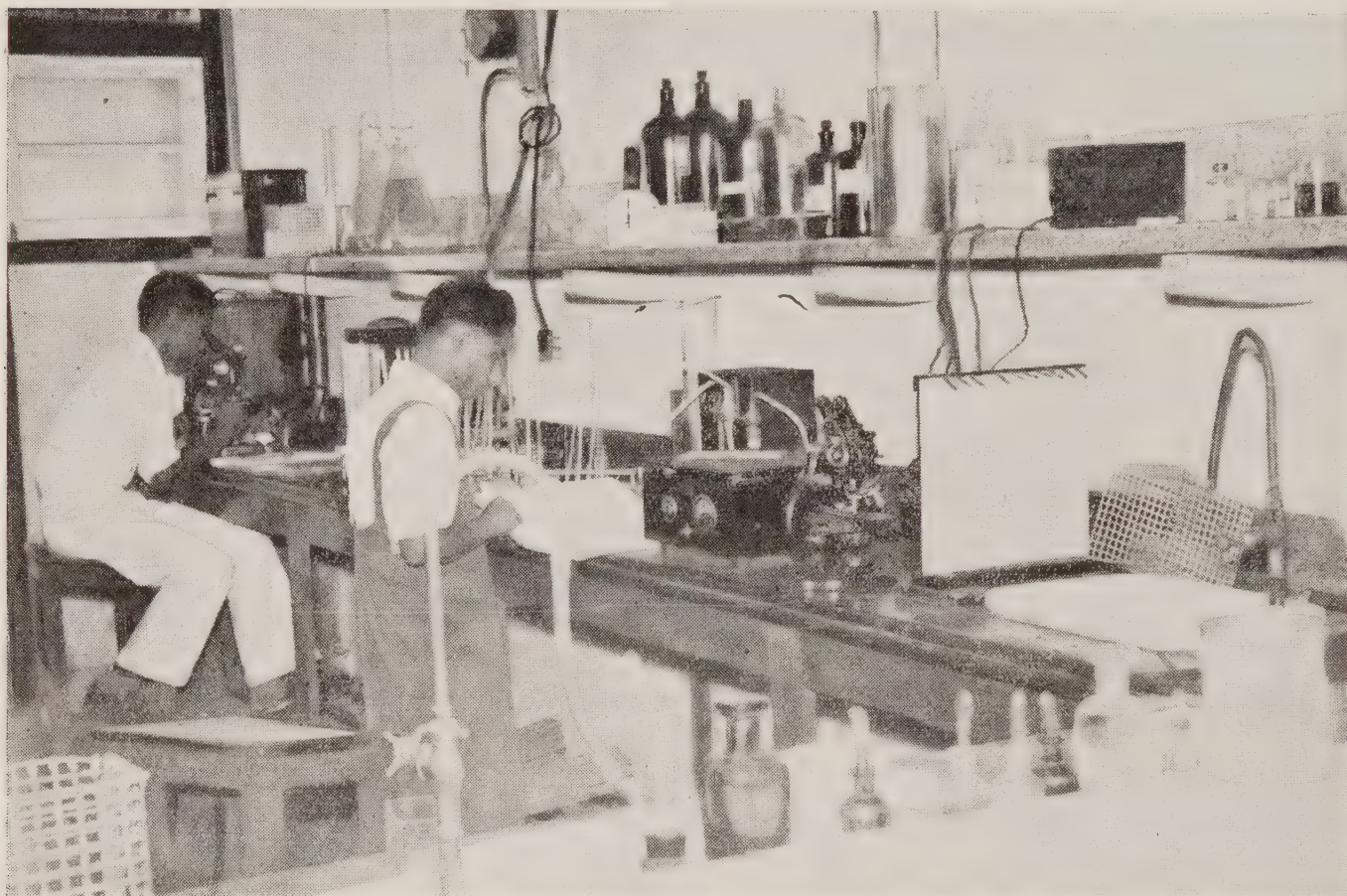
With the advent of long acting Penicillin in 1950 and the introduction of shortened courses of treatment for V. D., a larger percentage of V. D. patients completed their full course of treatment. As a result the defaulter rate was reduced considerably.

The emphasis has now shifted on to finding infected individuals in the community with the co-operation of the patients who attended the V. D. Clinic and bringing them under Penicillin treatment. The interviewing of infectious V. D. patients for their sexual contacts was introduced to the V. D. Clinic, Colombo, in 1950.

W. H. O., V. D. TEAM

A W. H. O., V. D. Team arrived in the Island in July, 1951. The Team consisted of a Physician as Senior Advisor, a Serologist and a Public Health Nurse.

Several blood surveys were carried out by the W. H. O. Team on various cross sections of the population and these revealed that approximately 5 per cent. of those tested gave a positive reaction in the blood for syphilis. This showed that there was a much higher incidence of this disease here than in Western countries. These surveys also revealed that one in every twenty-two expectant mothers have a positive blood test for syphilis. Following this



THE VENEREAL DISEASES LABORATORY IN COLOMBO

finding all expectant mothers attending the ante-natal clinics and maternity hospitals in the City of Colombo and some of the outstations are blood tested as a matter of routine. This has saved many an innocent child being with syphilis. It is planned to extend this service to every ante-natal clinic in the Island. The value of these routine ante-natal blood tests is clearly demonstrated by the drop in positivity of these tests in the city of Colombo from 4.5 per cent. in 1952 to 1 per cent. in 1957.

ANTI V. D. CAMPAIGN STARTED

During the year 1952 several important changes were effected in the organisation of the Anti-V. D. Campaign, the principal features of which were as follows :—

- (a) The Central V. D. Clinic, De Saram Place, Colombo, was completed in March, 1952, thereby bringing both male and female V. D. Clinics which

were conducted at the General and Lady Havelock Hospitals respectively under the same roof.

- (b) A Division of Venereal Disease Control called the Anti-V. D. Campaign was created and a Superintendent appointed in charge of it.

The first training course for medical officers under the new scheme was commenced on June 2, 1952.

- (c) A new schedule of treatment for early syphilis in consultation with the W. H. O. Advisor was started.

In 1953 full time V. D. clinics were established at Galle, Jaffna, Kurunegala and Negombo. The establishment of these clinics was part of a scheme for Island wide coverage which has been approved by the Department.

Dr. Mackenzie Pollock, W. H. O. Regional Advisor for South East Asia on V. D. and Treponematoses, visited Ceylon in May, 1953 and approved the scheme which had been planned for Island-wide coverage. A routine blood test for syphilis was started in March, 1953 as part of the physical examination of all new entrant candidates to Government Service.



BLOOD BEING TAKEN FOR TEST IN V.D.

NATIONAL PERSONNEL TAKE OVER

The W. H. O., V. D. Project was terminated on 31st December, 1953, and the international personnel were withdrawn. The year 1954 commenced with the national personnel taking over the entire responsibility of V. D. control in the Island.

Five additional V. D. Clinics were established at Katugastota, Anuradhapura, Ambalangoda, Badulla and Matale.

Routine blood testing of all admitted to the Victoria Memorial Eye Hospital was commenced. This has now been extended to the Prisons and Training Schools for Youthful Offenders throughout the Island.

PRESENT AND THE FUTURE

There are nine full time clinics with peripheral clinics attached to them today whereas there were only two clinics for males and females in Colombo in the past. All the clinics are now manned by officers trained abroad or at the Central V. D. Clinic, Colombo. With the expansion of the diagnostic and treatment facilities the case finding and caseholding services too expanded. Clinics are being opened each year according to the need of an area and the availability of trained personnel. The routine and mass blood testing organised during the past few years for syphilis and yaws eradication are a step forward in the control of both diseases.

PUBLIC EDUCATION

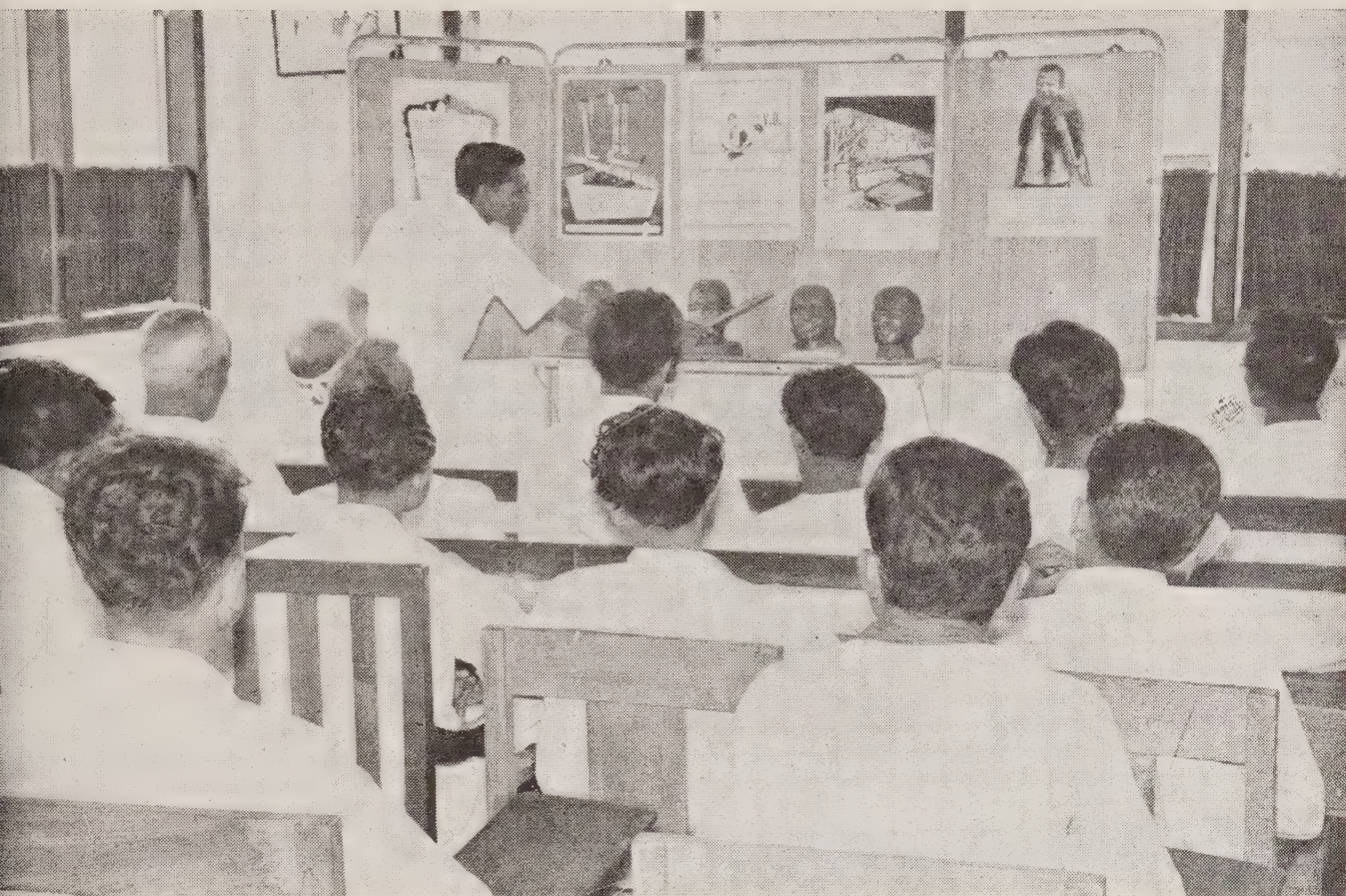
Public education which is an important part of the V. D. Control programme was intensified and developed on an Island-wide scale with the co-operation of the Medical Officers of Health. Information V. D. literature and posters were prepared for the education of the public regarding the facts of V. D. and the facilities available for the diagnosis and treatment of V. D. Judging from the inquiries made, advice sought and the demand for V. D. literature, it is evident that the V. D. education carried out has created public awareness and interest in V. D. Control problems.

VAGRANT PROBLEM

It is well-known that much V. D. is prevalent among vagrants. Hence the investigation and follow-up of all admissions to the Vagrants Home and House of Detention have been continued with the assistance of the Chief Probation Officer.

A report on the Beggar Problem in Ceylon (Sessional Paper XI of 1956) has been issued by the Department of Social Services and its recommendations

have been considered by a Special Committee appointed by the Hon. Minister of Labour, Housing and Social Services in order to draft suitable legislation to deal with the beggar problem.



A HEALTH EDUCATION CLASS FOR V. D. PATIENTS

The Superintendent, Anti-V. D. Campaign, was appointed a member of this Committee.

HOUSES OF ILL-FAME

Houses of ill-fame, especially in Colombo and the principal provincial towns, continue to remain as sources of infection to certain groups of the community who persist in their promiscuous habits. It is a difficult task for the Police authorities as well as the staff of the V. D. Campaign to bring such cases under control.

No longer to be Dreaded

LEPROSY—JUST ANOTHER COMMUNICABLE DISEASE

The attitude of the general medical profession and research workers towards Leprosy has changed—it is now looked upon as just another communicable disease to be understood, treated and prevented.

The availability of potent drugs for the cure of Leprosy and the treatment of non-effective cases and contacts at Government Hospitals and Dispensaries since 1955 have to a great extent made the public too lose the dread they formerly had for the disease.



A VIEW OF THE LEPROSY HOSPITAL AT HENDALA

EARLY SURVEY

The seriousness and importance of leprosy as a socio-economic problem was first realised in 1930 when the then Director of Medical and Sanitary Services suggested the idea of a Leprosy Survey as an essential step in tackling the problem. Two Medical Officers were sent to India for training in leprosy and on their return they formulated a scheme for the control of the disease.

The first item in the scheme was a preliminary survey of known cases of leprosy followed by a survey proper. Up to this time segregation was the only controlling measure and in 1932 the Island saw the beginning of the control of leprosy on modern lines. Effective methods of control were adopted and since then the progress of leprosy work has been steadily maintained.

WORK NOW BEING DONE

The Leprosy work done can be divided into two sections :—

(1) Institutional—

- (a) Leprosy Hospital, Hendala, 25 acres in extent with 640 beds ;
- (b) Leprosy Hospital, Mantivu—99 acres in extent with 220 beds ;
- (c) Department of Health Colony, Uragaha—12 twin cottages for 48 patients—a ward for 24 patients. The Colony has room for expansion.

(II) Field—

The Central Clinic at De Saram Place, Maradana, controls the activities of the field organisation with its 6 subsidiary clinics, besides maintaining contact between the institutions and field. The Central Clinic effectively doles out treatment to cases of leprosy besides observing and treating the contacts of cases.

A definite advance was made in the treatment of Leprosy in 1948 when a new Chemotherapeutic drug, Diamino Diphenyl Sulphone (D. D. S.) with bacteriostatic properties against the Lepra Bacillus was largely used in the various clinics and institutions. This new drug which is being used in all modern Leprosaria at present, is the least toxic and the most effective of the Sulphone group of drugs of which the others are Promin, Diasone, Promizole, Sulphetrone &c.

DEPARTMENT OF HEALTH COLONY

The Department of Health Colony at Uragaha—for able-bodied cases of leprosy—was declared open by the Prime Minister on August 27, 1952. This colony, one hundred acres in extent, is on the road from Kosgoda to Elpitiya in the Bentota Walallawiti Korale in the Galle District and is fifty miles from Colombo.

There are at present 12 twin cottages, each having two rooms, verandhas and kitchen, and is provided with a bath, water-seal latrine, pipe-borne water supply and garden space. There is also a ward of 24 beds and a central kitchen. Quarters are provided for the staff. Agricultural pursuits, including vegetable gardening and poultry farming, are carried out by the patients.

W. H. O. EXPERT

Dr. B. L. Malhotra, W. H. O. Leprologist, arrived in Ceylon on July 13, 1954, to advise on the Control and Treatment of Leprosy in Ceylon, and left in 1957.

With the decentralisation of the Department in operation since 1954, the Leprosy Campaign functioned as a separate organisation controlling the four

working units : Hendala Leprosy Hospital, Maradana Anti-Leprosy Clinic, Mantivu Leprosy Hospital, and the Department of Health Colony at Uragaha.

At the end of 1958, there were approximately 3,300 cases of Leprosy in a population of 9 million as against 2,808 cases in 1945 in a population of 6 million.

The integration of the treatment of Leprosy Cases and contacts with the local hospitals, dispensaries, through the Public Health Inspectors, was started in 1955.

Cabinet approval was obtained and a start was made in the employment of selected infective inmates as members of the minor staff at Hendala and Mantivu hospitals.

OCCUPATIONAL THERAPY

The Senior W. H. O. Officer and the Occupational Therapist continued their work during the year 1956. The Occupational Therapist left the Island at the end of October and this work was supervised by the Public Health Inspector who was her understudy. During the latter part of her stay she was able to make headway with the Pilot schemes. She initiated a programme of Occupational Therapy for the rehabilitation of leprosy patients. This work was carried out on organised lines as follows :—

(i) *Hendala*

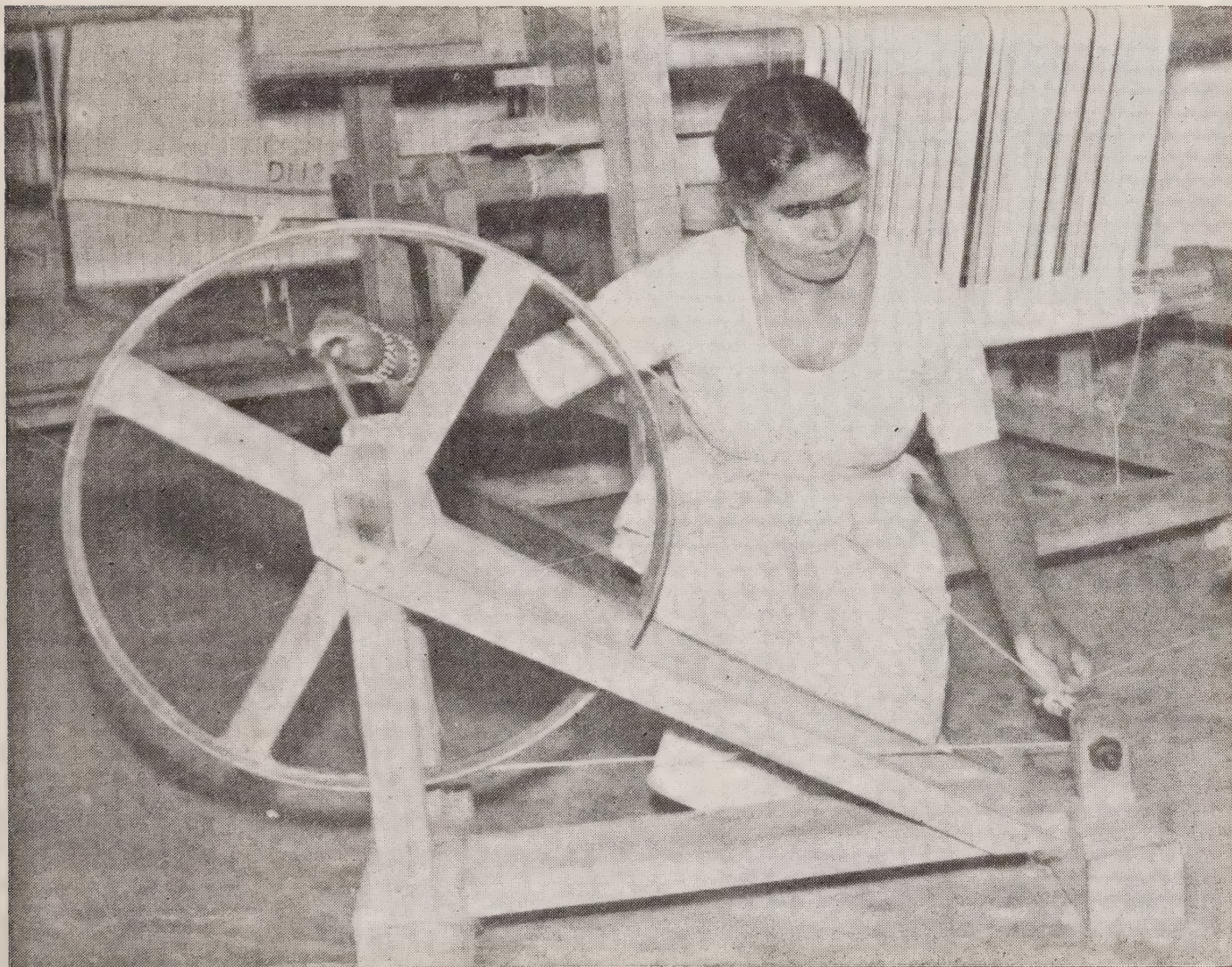
A Leather works instructor was appointed and about 12 patients were under training in sandal and stump boot making and special sandals for patients with anaesthesia and ulcers. A renovated building is used for this work centre. A new building was put up and used as a textile weaving centre.

(ii) *Uragaha*

It is proposed to develop the colony into a Rehabilitation Centre, in keeping with the modern emphasis on social and physical rehabilitation of leprosy patients. Weaving was introduced and an instructor from the Department of Cottage Industries was appointed to supervise the work and the work is being carried on in a newly constructed building.

FUTURE DEVELOPMENTS

On April 2, 1957, a conference was held with Hon. Minister of Finance, Hon Minister of Health, the Permanent Secretary, Director of Health Services W. H. O. Leprologist, re : allowances to non-infective cases of leprosy in Leprosy Institutions on their discharge from segregation. The Hon'ble Minister of Finance has now agreed to this payment.



PATIENT ENGAGED IN TEXTILE WEAVING

The following were also suggested :—

- (i) Removal of Leprosy Hospital, Hendala, from present site.
- (ii) Transfer of non-infective cases to Uragaha.
- (iii) Establishment of an Agricultural and Industrial Colony.
- (iv) Appointment of a Lay-Administrator to Leprosy Hospital, Hendala.

There is accommodation for approximately 966 patients in the institutions, and this will be sufficient to isolate all the needy infectious cases in the Island. Effective isolation combined with sanitary clean-up and an increase in the public health consciousness are still the measures needed to combat this infection.

A new development in the control programme has been a more intensive investigation, observation and treatment of contacts of known cases of leprosy.

Today leprosy is a curable disease with the modern Sulphone drugs aided by physiotherapy and reconstructive surgery where deformity is present.

Steps are being taken to introduce reconstructive surgery at Hendala so that deformity in leprosy which is the root cause of fear in leprosy can be totally erased from the public mind. Deformity is mostly preventable if adequate care and advice are given to patients. What is now required is more knowledge and more understanding regarding the disease and its effects among medical and para-medical personnel, public and patients.

If this can be achieved the eradication of leprosy is a possibility.

Ceylon's First Line of Defence

The Quarantine Services

Ceylon's defence against the introduction of dangerous infectious diseases like Cholera, Smallpox and Plague from neighbouring countries and against Yellow Fever from Yellow-fever infected areas, is embodied in the Quarantine and Prevention of Diseases Ordinance of 1897.

The original conception that quarantine measures were a kind of sanitary police and prison system as obtained at Ceylon's Segregation Camp at Mandapam was modified in 1951 in accordance with the International Sanitary Regulations to which Ceylon is a signatory, in order to give the well immunised traveller freedom of movement. It has been accepted that a more suitable measure against the importation of quarantinable diseases is to set up an effective Public Health Service to protect the community by immunising procedures and other advances made in medical science than to have a barrier of quarantine restrictions.

QUARANTINE CAMPS

The Quarantine Camp at Mandapam guards against the entry of Cholera and Smallpox infection into Ceylon from India through the rail route.

The Quarantine Camp at Tattapparai has since been closed down and passengers arriving from Tuticorin are dealt with at the port of Colombo.

Passengers are subject to medical surveillance in Ceylon provided they conform to the usual requirements. The quarantining of crew arriving at the Quarantine Station, Colombo via Mandampam Camp prior to joining their ships has been discontinued since June, 1958, as this procedure was not considered necessary in terms of the International Sanitary Regulations. For the same reason quarantining of 3rd class passengers passing through Mandapam Camp has been discontinued, provided they conform to the usual requirements.

PORT HEALTH ORGANISATION

The Port Health Organisation at Colombo, Galle, Trincomalee and Out-ports is an important section of the Quarantine Division. Ships are inspected

on arrival to determine whether they are healthy or carry infection. If infection is found within the ships, their cargo and personnel are appropriately dealt with.

All cargo such as rice and grain from Plague infected areas are considered Plague-suspect and are fumigated effectively with H. C. N. Gas before they are landed ashore. Till recently this process of fumigation of cargo was carried out in the lighters which were loaded with Plague-suspect cargo. As this procedure entails considerable delay, the fumigation was carried out in ship-holds on an experimental basis in 1957.

This has been considered a success and the procedure is now adopted in suitable cases.

In Colombo Harbour Mosquito Control work was systematically carried out with annual surveys of *Aedes-Egypti* as control measures against the introduction of Yellow Fever. Similar measures are carried out in Galle Harbour as well.

AIRPORT HEALTH SERVICES

The Airport Health Service is well established. Ratmalana the principal Airport is undergoing several improvements at present. There is a full time Airport Health Officer with necessary staff stationed there to combat the importation of disease by aircraft. At the Airports of Katunayake and Kankasanturai part-time Airport Health Officers are functioning. Ceylon is considered a Yellow Fever receptive area and in view of the possible entry of Yellow Fever into Ceylon through aircraft, special precautions are taken at our Airports, such as Mosquito control work at Ratmalana and Katunayake, and the disinfection of aircraft arriving from Yellow-fever infected areas.

Passengers arriving from such areas without valid certificates of vaccination against Yellow fever are liable to quarantine in an isolation hospital in Ceylon under suitable conditions.

New Era for Ayurveda

Development of Indigenous Medicine in Ceylon

THE Government's desire to grant State aid and recognition to the Indigenous Medical profession, which manifested itself in the creation of the Board of Indigenous Medicine in 1928 and the passing of the Indigenous Medicine Ordinance, No. 17 of 1941, has now culminated in the formation of a fully fledged Department for the Development of Indigenous Medicine, which will guide the future destinies of the Indigenous Medical profession.

Since the time of the Sinhalese kings, never has any Government shown as great an interest in the Development of Indigenous Medicine in Ceylon as the present government.



A VIEW OF THE NEW BLOCK OF THE AYURVEDIC HOSPITAL IN COLOMBO

The present Minister of Health stands out as one whose avowed ambition is to afford the Indigenous Medical profession pride of place which it enjoyed in its hey-day of professional grandeur. If the enthusiasm displayed by the present Government in general and the Minister of Health in particular continues, much could undoubtedly be achieved in the years to come.

BOARD OF INDIGENOUS MEDICINE

On the recommendation of a Special Committee appointed by the then Legislative Council, a Board of Indigenous Medicine was constituted by the Government in September, 1928. The Board was given the initial funds required for the construction of the necessary buildings for a College. An annual grant of Rs. 50,000 was thereafter given for the maintenance of the College and Hospital that was established subsequently.

COLLEGE OF INDIGENOUS MEDICINE

The College of Indigenous Medicine provides a course of studies of five years' duration leading to the Diploma in Indigenous Medicine and Surgery. During the period 1947–1957, 283 students have passed out as Graduates of the College. The number of students receiving training at the College during any single year has been maintained at approximately one hundred and sixty.

With a view to providing students of the College further hospital training a scheme was introduced in 1956 under which the students, who secure the first five places in order of merit in the Final Examination, are permitted to work in the Hospital under the supervision of the Chief Physician for a period of one year. The first batch of students have so far received training under this scheme.

The services of Ayurvedic Physicians of repute have been secured to provide the students training in the fields in which these physicians have specialised. Under this scheme Specialists in Boils and Carbuncles, Snake-bite, Nervous Disease, Eye Diseases, Fractures and Dislocations have been appointed.

Scholarship to the value of Rs. 96,000 and Bursaries to the value of Rs. 39,000 have been awarded during the period under review.

HOSPITAL

About 3,275,000 patients have been treated at the Out-patients' Department and about 32,000 patients have been treated at the Hospital during the period 1947-1957.



PATIENTS QUEING UP AT THE OUTDOOR DISPENSARY OF THE AYURVEDIC HOSPITAL AT BORELLA

The popularity of the Out-patients' Department of the Hospital could be gauged from the fact that on an average over a thousand patients visit the institution daily for out-door treatment.

PHARMACY

The Pharmacy attached to the Hospital manufactures all the medicines necessary for the treatment of patients in the Hospital and in the Out-patients' Department. With a view to modernising the Pharmacy, machinery such as Pill Making Machinery and Grinding Machinery have already been installed, and are found to be working satisfactorily.

PHARMACOPOEA OF INDIGENOUS MEDICINE

A Pharmacopoea for Ayurvedic Medicine was a long-felt need and a Pharmacopoea Committee was appointed by the Hon. Minister of Health in January 1951 “to examine all existing Pharmacopoeas and other data or material available and prepare a full Pharmacopoea of Indigenous Medicine”

The Pharmacopoea Committee is divided into three sub-Committees—Ayurveda, Siddha and Unani. The Ayurvedic and the Siddha Committees have submitted interim reports. So far more than two thirds of the work has been done. It is expected that the entire work will be completed in another two to three years time.

REGISTRATION OF PRACTITIONERS OF INDIGENOUS MEDICINE

The Indigenous Medicine Ordinance, No. 17 of 1941, as amended by Ordinance, No. 49 of 1949, provides for the registration of Practitioners of Indigenous Medicine by the Board. The other Institutions that are declared as approved institutions for the purpose of this Ordinance (by regulations) are the following :

- (1) The Siddha Ayurvedic College, Gampaha.
- (2) The Lanka Ayurvedic College, Jaffna.
- (3) The Ayurvedic Medical Council, Ceylon in respect of the Lanka Ayurvedic Vidya Gahkra Examination.

The total number of Practitioners of Indigenous Medicine registered under the Indigenous Medicine Ordinance to the end of December, 1957, is 7,570. Of this number 5,357 are General Physicians and 2,213 are Specialists.

As provided in the Ordinance, after 31 December 1952, only the Diploma Holders of the Board of Indigenous Medicine and the other Institutions mentioned above are eligible for registration as Practitioners of Indigenous Medicine.

GRANTS TO FREE AYURVEDIC DISPENSARIES

Grants are paid to Free Ayurvedic Dispensaries which are managed by Local Bodies and Private Boards of Management, provided they conform to certain conditions laid down by the Ministry of Health. Nearly half a million rupees has been paid by way of grants to Ayurvedic Dispensaries during the period under review.

The amount paid by way of grants to Ayurvedic Dispensaries in 1951 was only Rs. 25,000 but in 1957 as much as Rs. 100,000 was paid.

New Buildings

HOSPITAL

The scheme for the extension of the Hospital of Indigenous Medicine envisages the construction of buildings at the cost of Rs. 2,500,000 chargeable to Loan Fund Expenditure.

One of the two sets of wards has already been completed and will be occupied shortly. This will accommodate an additional 128 patients. The Administration-cum-O. P. D. Block is nearing completion and will be ready for occupation shortly.

COLLEGE

An additional two-storied building the estimated cost of which is Rs. 612,000 is to be provided for the College.

RESEARCH SECTION

A sum of Rs. 150,000 chargeable to Loan Fund Expenditure is earmarked for the construction of an Indigenous Medical Research Section. Work in this connection will commence shortly.

PILOT PHARMACY

A sum of Rs. 500,000 chargeable to Loan Fund Expenditure is also ear-marked for the construction of a Pilot Pharmacy for the manufacture of Indigenous Medicine. This project was held up for many years owing to the non-availability of a suitable land to site the buildings. But due to the keen interest taken by our present Minister of Health, a five-acre block of buildable land close to the College and Hospital of Indigenous Medicine has now been made available for this purpose. The question of setting up a State-run Pharmacy is being reviewed by the Government.

AYURVEDIC COMMITTEE

An Ayurvedic Committee was appointed by the Hon. Minister of Health in 1956, to enquire into and make recommendations inter alia regarding measures that should be adopted by Government for the advancement of Ayurveda. The recommendations of this Committee have been accepted by Government. A Department for the Development of Indigenous Medicine has been set up under a Commissioner.

The College curriculum has already been re-organised on the lines of the recommendations of the Committee, the guiding principle being that it should be predominantly Ayurvedic. The First Year students are now following

the syllabus recommended. Arrangements are being made to invite leading Ayurvedic Physicians to lecture to the students on important Ayurvedic subjects.

Future Development

In keeping with the declared policy of the present Government of supporting Indigenous Medicine, it is proposed to introduce shortly legislation for the development of Indigenous Medicine.

The proposed legislation will include among other things provisions for—

- (a) setting up of an Indigenous Medical Council for the regulation of the profession and the registration of Indigenous Medical Practitioners ;
- (b) setting up of a College Council for the management of the College of Indigenous Medicine ;
- (c) setting up of Hospital Boards for the management of Indigenous Hospitals ;
- (d) the establishment of a Research Council to organise Indigenous Medical Research, publication of Indigenous Medical Journals, editing and publication of ancient manuscripts, Clinical Research &c. ;
- (e) securing improved facilities for Indigenous Medical Practitioners to obtain drugs that come under the Excise Ordinance and the Dangerous Drugs Ordinance ;
- (f) the registration and control of Pharmacies and other places where drugs are manufactured and or sold.



THE ROYAL SOCIETY

FOR THE PROMOTION

OF HEALTH

Founded 1876

LIBRARY REGULATIONS

(a) Books, periodicals and pamphlets may be borrowed by Fellows, Ordinary Members, Associates and Affiliates personally or by a messenger producing a written order. The person to whom such publications are delivered shall sign a receipt for them in a book provided for that purpose.

(b) Publications may be borrowed through the post upon a written order. An acknowledgement of the receipt of such publications must be made on the form provided and returned to the Society immediately. Failing this, it will be assumed that the borrower has received the books, for which he will accordingly be held responsible. The postage of publications returned to the Society shall be defrayed by the borrower.

(c) A borrower may not have more than three publications in his possession at one time.

(d) A borrower will be considered liable for the value of any publication lost or damaged while on loan to him, and, if it be a single volume or part of a set, for the value of the whole work thereby rendered imperfect. Marking or writing in the publications is not permitted, and borrowers are requested to call attention to damage of this character.

(e) **Books and pamphlets may be retained for twenty-eight days. Periodicals may be retained for fourteen days. Applications for extension of the loan period must be made in writing before its expiry.** This loan period cannot be extended without application being made to the Secretary of the Society whose decision in this matter must be accepted as final and binding.

(f) Books and pamphlets added to the Library will not be lent until after the expiry of one month from the date received. The current number of a periodical may not be borrowed.

(g) Borrowers retaining publications longer than the time specified, and neglecting to return them when demanded, forfeit the right to borrow until they be returned, and for such further time as may be ordered by the Council.

Any borrower failing to comply with a request for the return of a publication shall be considered liable for the cost of replacing it, and the Council, may, after giving due notice to him, order it to be replaced at his expense.

No publication may be reissued to the same borrower until at least seven days have elapsed after its return, neither may it be transferred by one borrower to another.

(h) **Publications may not be taken or sent out of the United Kingdom.**

(i) Publications returned through the post must be securely packed and adequately protected.

(j) **Parcels should be addressed: THE LIBRARIAN,**

THE ROYAL SOCIETY OF HEALTH

90 BUCKINGHAM PALACE ROAD, LONDON, S.W.1

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